No. 70965

HAMPSTEAD PUBLIC LIBRARIES

CENTRAL LENDING LIBRARY,
FINCHLEY ROAD, N.W. 3.

Lending Library Hours.—The Lending Library is open from **10.30** a.m. to **7.30** p.m. every day except Sunday, Wednesday, Christmas Day, Good Friday, Bank Holidays, and such other days as the Committee may from time to time direct.

Examination of Books.—Registered borrowers are permitted direct access to the bookshelves.

Borrowers are particularly requested to replace books, after examination, in the order upon the shelves from which they were taken.

A card catalogue is provided for purposes of reference.

S. 587—5,000—10-30.

RESERVE STOCK.

MSL.
ORWIN, C.S.
The reclamation
of Exmoor forest.

U690.14

LONDON BOROUGH
OF
LEWISHAM
LIBRARY SERVICE

Author

Title

BOOK STORE

Books or discs must be returned on or before the last date stamped on label or on card in book pocket. Books or discs can be renewed by telephone, letter or personal call unless required by another reader. After library hours use the Ansafone Service (01-698 7347). For hours of opening and charges see notices at the above branch, but note that all lending departments close at 1 pm on Wednesday and all libraries are closed on Sundays, Good Friday, Christmas Day, Bank Holidays and Saturdays prior to Bank Holidays.

METROPOLITAN
SPECIAL COLLECTION

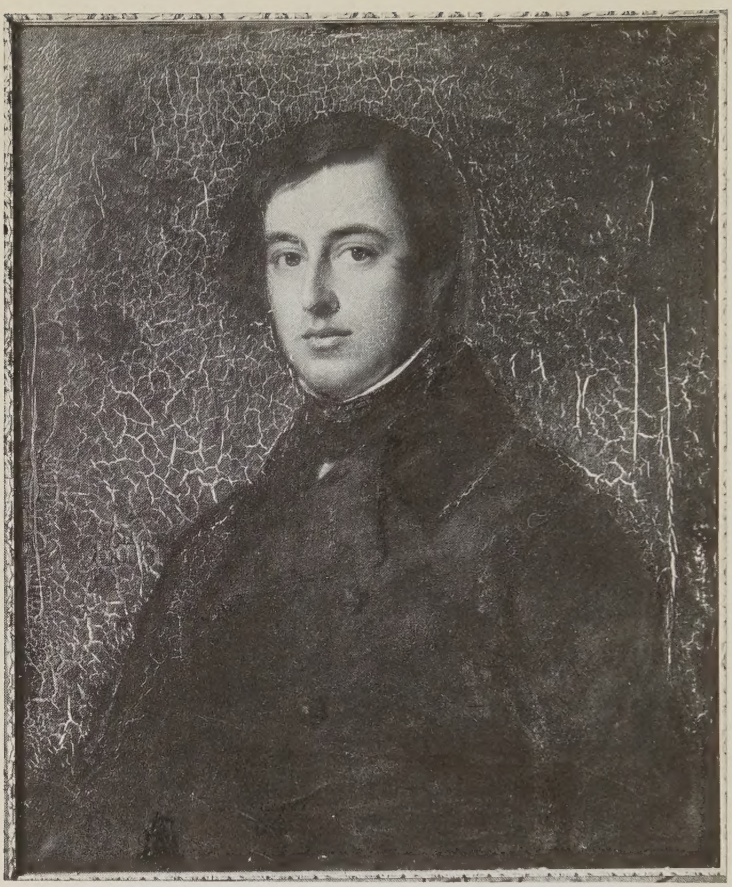
Digitized by the Internet Archive
in 2026

https://archive.org/details/reclamationofexm0000csor

THE RECLAMATION OF EXMOOR FOREST

OXFORD UNIVERSITY PRESS
AMEN HOUSE, E.C. 4
LONDON EDINBURGH GLASGOW
LEIPZIG NEW YORK TORONTO
MELBOURNE CAPETOWN BOMBAY
CALCUTTA MADRAS SHANGHAI
HUMPHREY MILFORD
PUBLISHER TO THE
UNIVERSITY

HAMPSTEAD
PUBLIC LIBRARIES

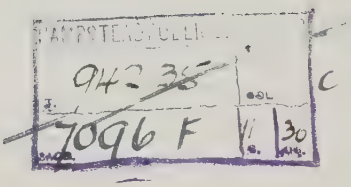


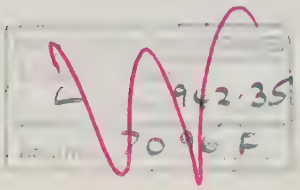
FREDERIC WINN KNIGHT
c. 1835

THE RECLAMATION OF EXMOOR FOREST

By C. S. ORWIN

OXFORD UNIVERSITY PRESS
LONDON : HUMPHREY MILFORD
1929


942.35
7096 F
30


942.35
7096 F

Printed in Great Britain

To E.

'In Travelling thro' *England*, a Luxuriance of Objects presents itself to our View: where-ever we come, and which way soever we look, we see something New, something Significant, something well worth the Travellers stay, and the Writer's Care; nor is it any Check to our Design, or Obstruction to its Acceptance in the World, to say the like has been done already, or to Panegyrick upon the Labours and Value of those Authors who have gone before, in this Work: Whoever has travell'd *Great Britain* before us, and whatever they have written, tho' they may have had a Harvest, yet they have always, either by Necessity, Ignorance or Negligence pass'd over so much, that others may come and glean after them by large Handfuls.

'Nor cou'd it be otherwise, had the Diligence and Capacities of all who have gone before been greater than they are; for the Face of Things so often alters, and the Situation of Affairs in this *Great British* Empire gives such new Turns, even to Nature it self, that there is Matter of new Observation every Day presented to the Traveller's Eye.'

'The Country is called *Exmore*, Cambden calls it a filthy, barren Ground, and, indeed, so it is.'

DANIEL DEFOE (1661–1731).

HAMPSTEAD
PUBLIC LIBRARIES

PREFACE

THE story of the reclamation of Exmoor Forest by the Knights, father and son, should have something more than a local interest. Every student of economic history is familiar with the general procedure upon the inclosure of land during the Hanoverian period and is aware that large areas, hitherto unproductive, were brought under cultivation in those times, but very little has been recorded of the steps by which the work was done, of the persons to whose initiative it was due, of the difficulties they had to overcome, and of the results achieved by these pioneers of agricultural progress. Although the inclosure and settlement of Exmoor Forest presented problems of exceptional difficulty, the venture is typical, in many ways, of the enterprise of men of wealth, all over England, during the industrial revolution, directed towards the development of the resources of the soil. The subject is an absorbing one for all who are not content to accept the things they see around them in the country-side as natural phenomena; but the information needed for some account of the synthesis of agricultural expansion is singularly scanty concerning the days when progress was most active, when the growth of urban and of rural industry was going on side by side, and when farming in England was a business which really mattered to the nation.

No area could provide a better illustration of such work than Exmoor. Except for one small farm its twenty thousand acres was a complete waste, untouched by man. Except for the one farm-house there was no habitation upon it; except for a few ancient trackways it was untraversed. It was unfenced, its confines being marked by stones, barrows, trees, and streams; it was extra-parochial, and it possessed no social institutions of any kind except the Swainmote Court and the inn-keeper's licence held by the tenant of the farm.

From the construction of the boundary wall and the

metalling of the old trackways, the story of its reclamation proceeds to the breaking of the soil, first with ox-teams, then with horses, and later with steam tackle. There were vain attempts at corn-growing in an impossible climate, by the owner; later, at mixed farming and dairying by tenants from the more fertile farmlands of the midlands and southern counties, who took up the new farms and homesteads created on the Forest. They came and went, and the development of Exmoor went on, by the process of trial and error, till the time arrived when a farming system adapted to the potentialities of the locality had been evolved at last, and native farmers came in to occupy the holdings created by others at an expenditure of so much toil and money. There is the foundation of a great sheep-ranching enterprise—probably unique in England—on the unimproved portions of the Forest. The building of a village is seen, and the evolution of a civil and ecclesiastical parish, the largest in Somerset, out of what was once a wilderness. There is also a brief interlude during which it was sought to develop the resources of the property in minerals.

Materials for the history of the reclamation are not complete, but sufficient remains to make it possible to construct a picture which is exact in most of its details. By the kindness of Major Eric A. Knight, access has been had to the records and papers preserved at Wolverley House; and the information they contain has been supplemented by him in many important directions, filling in some of the gaps disclosed. Without these materials, and his ready assistance, it would have been impossible to complete even so much of the picture of Exmoor land reclamation and settlement as is given here, particularly as regards the earlier years. Second only to his help has been that afforded so freely by Earl Fortescue, who made available for the purpose in view his own records as owner of the Forest in its later years, and his experience of a lifetime of its changing fortunes. Whatever success has attended this

attempt to trace the history of a great agricultural adventure during a hundred years is due, in the main, to the kindly interest they have shown and to their very practical assistance.

It is a pleasure, too, to acknowledge the ready help of the late George Cobley Smyth-Richards, who, succeeding his father as agent, first for the late Sir Frederic Knight and then for Earl Fortescue, had an intimate knowledge of the locality extending over a long lifetime. It is a matter of regret that he has not lived to see this acknowledgement, so gladly made.

In particular matters much help has been given by many people: Mr. E. T. MacDermot, author of the exhaustive history of the Royal Forest; Capt. E. C. Lloyd, secretary of the Devon and Somerset Staghounds; Mr. Arthur F. Brown, agent for the Blathwayt estates; Mr. A. B. Rodger, fellow and tutor of Balliol College; Mr. F. R. Huxtable, of the *Yorkshire Post*, and his brother Mr. John H. Huxtable, of Challacombe; Mr. George Molland, the steward at Simonsbath; Mr. D. B. Toye, of the Ministry of Agriculture; Professor R. G. Stapledon, of the Welsh Plant Breeding Station, Aberystwyth; Mr. F. J. Prewett and Mr. D. Skilbeck, my good colleagues; my sons, Robert, John, and Francis; and Mr. Alfred J. Vowles of Minehead, who is responsible for all the Exmoor illustrations except the top one facing p. 103.

Certain information has been obtained from such of the old rate-books as are still in existence, including the earliest of all, that for 1858, but many of them have been lost. There seems to be no responsibility for the care of such records, but obviously they should be in public custody.

As to the assistance obtained from published sources, practically nothing has been found prior to 1850—that is to say, concerning the period in which John Knight was directing, in person, the reclamation enterprise which he had originated. After that date, and for the next thirty years, when farming rather than equipment

was the principal feature, a good deal was recorded in contemporary journals, particularly by Sir Thomas Acland, the eleventh of his line; Robert Smith, for eighteen years agent on Exmoor; and Samuel Solomon, an agricultural journalist who assumed the name of Sidney, under which he wrote. All of them appreciated the immensity of the task; and dealing more, perhaps, with promise than with fulfilment, they may have been unduly optimistic in their comments. This tendency is certainly corrected in the works of the many more modern writers on Exmoor, most of whom have gone to the other extreme, and have failed to see the real achievement through the haze of costly experiment and misdirected effort.

C. S. O.

Agricultural Economics Research Institute,
Oxford, *June* 1929.

CONTENTS

I.	PIONEERS OF AGRICULTURE	1
II.	INCLOSURE AND SALE OF THE ROYAL FOREST, AND THE BEGINNING OF RECLAMATION	17
III.	1820–1841. DEMESNE FARMING	34
IV.	1842–1850. LANDLORD AND TENANT	49
V.	1851–1866. CHEQUERED EXPERIENCES	70
VI.	1867–1879. RAPE RECLAMATION AND SHEEP RANCHING	85
VII.	1880–1897. CARRYING ON	99
VIII.	1898–1928. LANDLORD AND TENANT AGAIN	104
IX.	MINING	115
X.	THE PARISH OF EXMOOR	153
BIBLIOGRAPHY		165
INDEX		167

ILLUSTRATIONS

Frederic Winn Knight, about 1835 . . *Frontispiece*

Richard Payne Knight, 1792, by Sir Thomas Lawrence, P.R.A. *facing p.* 8

Daniel Cunynghame 9

The Hon. Mrs. John Knight 14

Lady Knight, 1853 15

Exmoor Roads as John Knight found and made them . 30

Pinkery Pond 31

The Canal from Pinkery Pond 31

The Dongola Arab, *Mahmoud*, by James Ward, R.A. . 46

The Forest as John Knight found it . . . 47

The Forest as John Knight made it . . . 47

Emmett's Grange 66

An Exmoor Fence 66

An Exmoor Kitchen 67

Cheese Presses 67

Improved Grassland 76

Arable land—Oats and Turnips 76

Larkbarrow 77

The Last of the Border Shepherds 88

The Second Generation 89

The Sutherland Plough 97

Cartoon of Frederic Winn Knight, 1884, by Leslie Ward . 102

Simonsbath in 1897 103

Simonsbath House to-day 103

Family Farming. The Secret of Success . . . 108

Cheviot Sheep on the Forest 109

Earl Fortescue 112

G. C. Smyth-Richards 113

A 'Roman' Surface Working, on Burcombe . . . 126

Wheal Eliza Mine and Cottage, on the Barle . . 126

Entrance to the Main Drift at Cornham Ford . . 127

Inside the Main Drift 127

MAPS

Exmoor Forest at the time of Inclosure . . *facing p.* 20
Emmett's Grange about 1850 58
Plan and Section of the Dowlais Iron Company's Mining Operations on Burcombe and Hangley Cleeve, 1855–58 . 132
Plan of Messrs. Schneider & Hannay's Mining Operations in the Deer Park 138
Exmoor Forest to-day 162

HAMPSTEAD
PUBLIC LIBRARIES

I

PIONEERS OF AGRICULTURE

THE making of the land of England has been, for the most part, a slow and often a painful process. Following the days when men moved over the country with their flocks and herds, tilling a few patches of land as they went, cultivation began as communities settled, here and there, on the more favourable spots, and it was extended and developed, first of all, just so far as the growth of population required. 'Land' was added to 'land', and 'furlong' to 'furlong', to provide sustenance for the self-sufficing local communities which went to make up the nation before the dawn of industrialism and the advent of farming for profit.

With the spread of the inclosure movement and the allotment of the common lands in the later eighteenth and early nineteenth centuries, coinciding as these changes did, very largely, with a prolonged spell of high prices for agricultural produce, consequent on the disturbed state of Europe and the demands of the growing urban population, the reclamation of the waste lands of England came more and more to be dictated by the chances of profit, and to depend less and less merely upon the needs of an increasing rural community. No doubt the two processes went on simultaneously, the small, slow, and laborious inroads into the wild by the peasant cultivator seeking to increase the family food-supply, of which ocular demonstrations are provided in every hill-district of England, and the larger, more ambitious, better-directed schemes of the greater landlords for the exploitation of large areas formerly regarded as below the margin of profitable cultivation; but it was through the latter, rather than the former, that production from the soil was made to keep pace during, say, the century following the year 1750, with the need created by the rapid development of a great,

non-agricultural, consuming class. In very many districts large areas of heath and moorland were brought into cultivation, and in others the drainage of tracts of waterlogged land put a great acreage of potentially fertile soil under the plough. Thus much of the sandlands of Norfolk and Suffolk; the great tract of light limestone between Sleaford and Lincoln which constituted Lincoln Heath; the chalk formation in the Lincolnshire and Yorkshire Wolds; much of the wet lands of the Fen counties; these and many other stretches came first into productive use in agriculture at this time. The increase and spread of knowledge of new methods of cultivation, of new crops and of engineering, leading to drainage and to the successive steps of paring and burning, of claying and marling, root-growing and sheep-feeding, and to the four-course system of farming, perfected, in Norfolk, by the invention of the drill and the horse-hoe and the use of crushed bones and rape-cake, to which the economic conditions generally prevailing applied the stimulus of self-interest, all these things combined to bring about results, during this period, which have no parallel in agricultural history before or since.

Some of these great works of land reclamation are well known, both in themselves and in association with the names of those to whose enterprise they owe their achievement. Thus the dukes of Bedford will always be remembered in connexion with the drainage of the Ouse valley, and every one to-day has heard of 'Coke of Norfolk', afterwards Lord Leicester, who made a great agricultural estate, and inspired others to go and do likewise, where formerly was only 'one blade of grass and two rabbits fighting for that'. As regards other pioneers, the study of contemporary literature brings to light many works of improvement carried out all over the country, and it comes with something of a shock to realize how recent, historically, most of them are, and how very little is known of the men to whom they are due. Roads, fences, drains, ploughland, grass-

land, woodland, homesteads and cottages, all of which are accepted to-day without arousing a single curious thought, owe their being, in many cases, to the courage and enthusiasm, no less than to the business acumen, of landlords and farmers hardly a hundred years dead—makers of rural England who have gone to their graves unhonoured and unsung except, sometimes, in obscure or ephemeral literature. 'The owners of property, fortunately for themselves, for the cause of improvement, and the benefit of the country at large, co-operated with their spirited tenants. . . . The money which was made by farming was again eagerly applied, under the encouragement of leases, to the reclaiming of waste lands and the promotion of agricultural improvement. Section after section of the outfield land, so-called, was brought into productive cultivation.' Often their reward, in a financial sense, cannot have been forthcoming, and in some cases the results of their efforts have not been permanent; either these were wrongly conceived or they could be justified only if the economic conditions prevailing at the time of their inception had enjoyed a permanence which was not destined to be theirs. Thus there can be seen to-day tens of thousands of acres of permanent grassland showing the marks of more intensive use, at some earlier period, in their ridge-and-furrow formation; other grassland areas, similarly marked, which are now given up largely to bushes and brambles; a few again, which have reverted completely to the natural thicket or scrub forest from which they were first evolved. In other cases, the farming lands and homesteads created by the enterprise of these stout-hearted pioneers still exist, to gladden the eye, to provide employment, and to add their quota to the wealth of the nation, but with the probability that, if measured only by the return on the capital staked, the ventures must be regarded merely as failures.

In England, during the period under review, there is no doubt that much of the land reclamation and development yielded a full measure of compensation to those

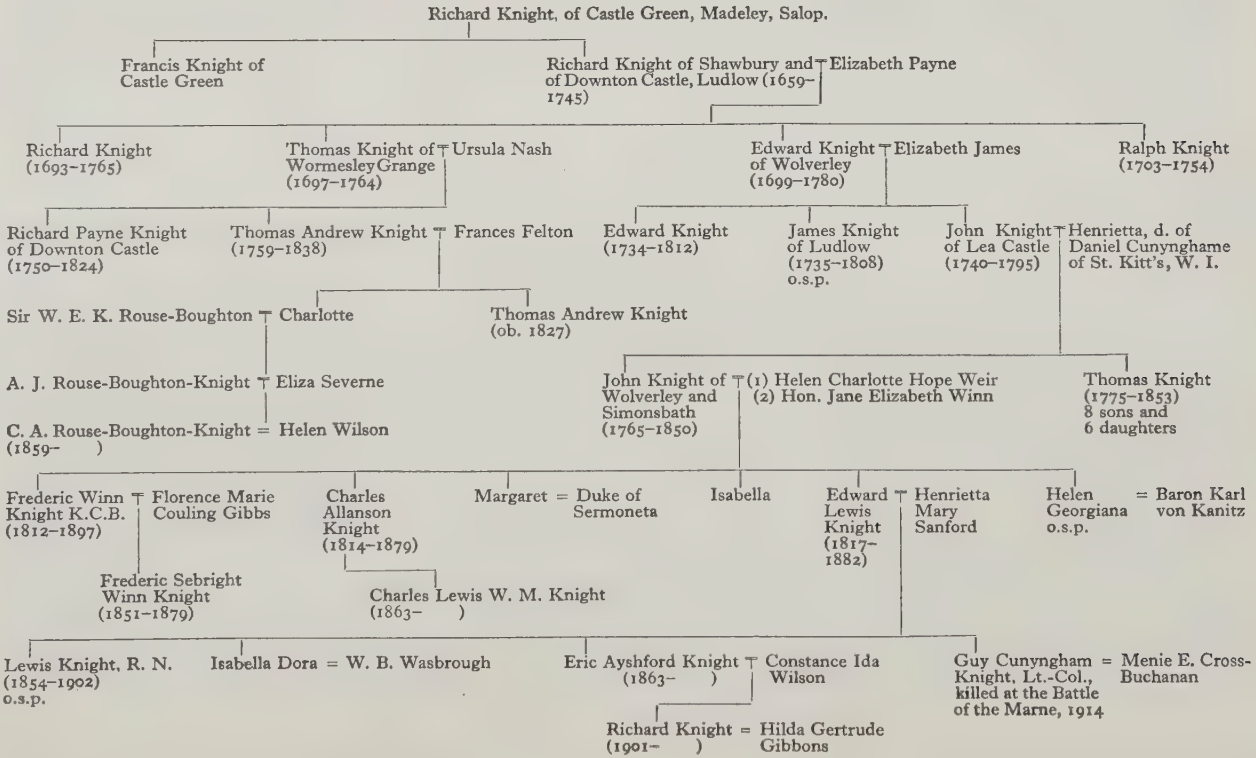
concerned in it, but it is equally sure that, here and there, the time, thought, and money spent upon such works brought an inadequate financial return. The subsistence-farmer, eating slowly into the waste outside his boundary, took no thought of the cost of his work, nor could this be expressed in terms of money; it represented to him so much additional pasturage for his stock, so many extra crop-acres, gained at an expenditure not of his capital but of his labour, and of this he was, by necessity, prodigal. The capitalist adventurer was in a different case, for with whatever public-spirited motives he may be credited—and such may fairly be conceded in many cases—the mainspring of his operations was, quite naturally, the prospect of gain.

Records of the cost of small ventures were never kept, and those of the larger enterprises are almost unknown. Either they have been destroyed, or else they lie, for the most part, buried and forgotten, in the estate offices and muniment rooms of such of the older estates as have survived the national indifference of the last two generations to the agricultural industry. To-day, the value of reclamation and improvement can be judged only by the results that have survived, and who can establish a standard by which to measure them? In many cases satisfactory returns, on a strict financial basis, must have accrued to the improvers; in others, the border-line cases, it may be asserted that if the returns to the landlords were not of the order of five per cent., the joint returns on the capital of landlord and tenant together, considered over a term of years, have been enough, probably, to justify the work. In the last case, the one in which the balance of probability is definitely against any adequate financial return on the capital outlay of the original improver and his first tenants, the lot of these men has been no other than that which falls, commonly enough, to the pioneer. 'While the field laughs with grain, it is more than possible that the owner groans at the cost of its artificial fertility. Too often he must feel it would have been better to

have left the down unbroken, the copse ungrubbed, the gorse and heather to bloom in peace, the sullen clay undrained, the boulders where they lay on the moor and the grand homestead in the architect's office.' Nature is an intractable steed, and her surrender to those who seek to guide and control her is sometimes dearly bought. But who will venture to equate the cost and the value of work such as these men accomplished? And who can look upon productive fields and comfortable homesteads, making their contribution both in men and material to the welfare of the State to-day, and say that they have not been worth while? It may well be that, as the State is the ultimate gainer by them, the State should have borne the cost, but whatever developments in this direction the future may hold in store, the past history of achievement in agriculture affords an impressive example of the enterprise, the skill, and the capacity of the English agricultural improvers, both landlords and farmers, of days gone by. 'Side by side with social progress the ameliorating changes have been advanced, not by the silent operations and development of Nature or by the natural increment of value, but by the dogged effort which the landowner, as a rule, has ever put forth in the making of the land, and at any cost fitting it for the practice of improved husbandry suited to the progress of civilization and the modern wants of the people.'

Of this class was John Knight, with whom originated the making of Exmoor Forest as it appears to-day. He came of a family distinguished both in industry and the arts. He was the fourth in succession from Richard Knight, whose family had long been associated with the town of Shrewsbury and who made a great fortune as an ironmaster in the time of the Commonwealth. Under Richard Knight's second son, also Richard (1659–1745), born at Castle Green, Madeley, Salop, the ironworks increased in importance. He began work at a forge at the lower end of Coalbrookedale, then moved to Moreton, in Shawbury parish, and about the year 1698 he took a

PEDIGREE OF THE FAMILY OF KNIGHT, OF SHROPSHIRE AND WORCESTERSHIRE


Richard Knight, of Castle Green, Madeley, Salop.
Francis Knight of Castle Green
Richard Knight of Shawbury and of Downton Castle, Ludlow (1659–1745)
Elizabeth Payne
Richard Knight (1693–1765)
Thomas Knight of Wormesley Grange (1697–1764)
Ursula Nash
Edward Knight of Wolverley (1699–1780)
Elizabeth James
Ralph Knight (1703–1754)
Richard Payne Knight of Downton Castle (1750–1824)
Thomas Andrew Knight (1759–1838)
Frances Felton
Edward Knight (1734–1812)
James Knight of Ludlow (1735–1808) o.s.p.
John Knight of Lea Castle (1740–1795)
Henrietta, d. of Daniel Cunynghame of St. Kitt's, W. I.
Sir W. E. K. Rouse-Boughton
Charlotte
Thomas Andrew Knight (ob. 1827)
A. J. Rouse-Boughton-Knight
Eliza Severne
C. A. Rouse-Boughton-Knight (1859–)
Helen Wilson
John Knight of Wolverley and Simonsbath (1765–1850)
(1) Helen Charlotte Hope Weir
(2) Hon. Jane Elizabeth Winn
Thomas Knight (1775–1853) 8 sons and 6 daughters
Frederic Winn Knight K.C.B. (1812–1897)
Florence Marie Couling Gibbs
Frederic Sebright Winn Knight (1851–1879)
Charles Allanson Knight (1814–1879)
Charles Lewis W. M. Knight (1863–)
Margaret = Duke of Sermoneta
Isabella
Edward Lewis Knight (1817–1882)
Henrietta Mary Sanford
Helen Georgiana o.s.p.
= Baron Karl von Kanitz
Lewis Knight, R. N. (1854–1902) o.s.p.
Isabella Dora = W. B. Wasbrough
Eric Ayshford Knight (1863–)
Constance Ida Wilson
Richard Knight (1901–)
Hilda Gertrude Gibbons
Guy Cunyngham Knight, Lt.-Col., killed at the Battle of the Marne, 1914
= Menie E. Cross-Buchanan

twenty-one years' lease of Bringewood Forge, near Ludlow, from the Earl of Craven, and he himself acquired Downton in that neighbourhood. Before the expiration of his lease he had bought the property, and during the first thirty years of the eighteenth century he added to it other lands in Herefordshire. By 1740 he had two furnaces and several forges in Shropshire, a forge in Staffordshire, besides the furnace and forge at Bringewood. He died in 1745, and was buried in Burrington Church, with a slab of cast iron for his tombstone. He left a large fortune which passed eventually to his grandson, Richard Payne Knight (1750–1824), elder son of the Rev. Thomas Knight (1697–1764), rector of Bewdley and Ribbesford, Worcestershire.

In Richard Payne Knight the genius transmitted by his forebears took on a new expression. He was a delicate boy who was not at any University, but much of his youth was spent abroad, where, no doubt, he first acquired his taste for classical art, as a connoisseur of which he was pre-eminent in his day. He cared little for sculpture, but he made a fine collection of bronzes, coins, and gems. He wrote much on Greek mythology and art, but he was opposed to the national acquisition of the Elgin collection, and told Lord Elgin at a dinner party that he had 'lost his labour' in bringing over the Parthenon marbles. Goethe published a translation of his diary, in his life of Hackert, the German painter, with whom Payne Knight had travelled in Sicily.

On inheriting the Downton Estate of some 10,000 acres, he built the castle on it, and he sat in Parliament, first for Leominster, and then for twenty-two years for Ludlow (1784–1806), but he made no particular mark in the House. At his death he left his collections to the British Museum upon the sole condition of the appointment of a perpetual 'Knight family Trustee', which was arranged by an Act passed in the year of his death. His portrait was painted in 1792 by Sir Thomas

Lawrence, and is now the property of the Society of Dilettanti.[1]

Richard Payne Knight died unmarried, and was succeeded by his brother, Thomas Andrew Knight (1759–1838), a man equally distinguished in another sphere. He had been educated at Ludlow Grammar School, and matriculated in February, 1778, at Balliol College, Oxford, but it is said that 'close application was not one among the characteristics of his College life'. He was early distinguished, however, as a sportsman, farmer, and horticulturist. He became a correspondent of the Board of Agriculture on the nomination of Sir Joseph Bancks, and conducted many experiments at his home, at Elton, in raising new varieties of fruit and vegetables. In 1795 he was the reader of a paper before the Royal Society on grafting and the inheritance of disease among fruit trees.

He was an original member of the Royal Horticultural Society (established 1804), of which he was President from 1811 until his death, and he contributed to every number of its *Transactions* from their first publication in 1807. In 1806 he was awarded the Copley Medal, and in 1836 the first Knightean Medal of the Society, founded in his honour, bearing his own portrait by Wyon. In 1805 he was elected Fellow of the Royal Society and, in 1807, Fellow of the Linnean Society.

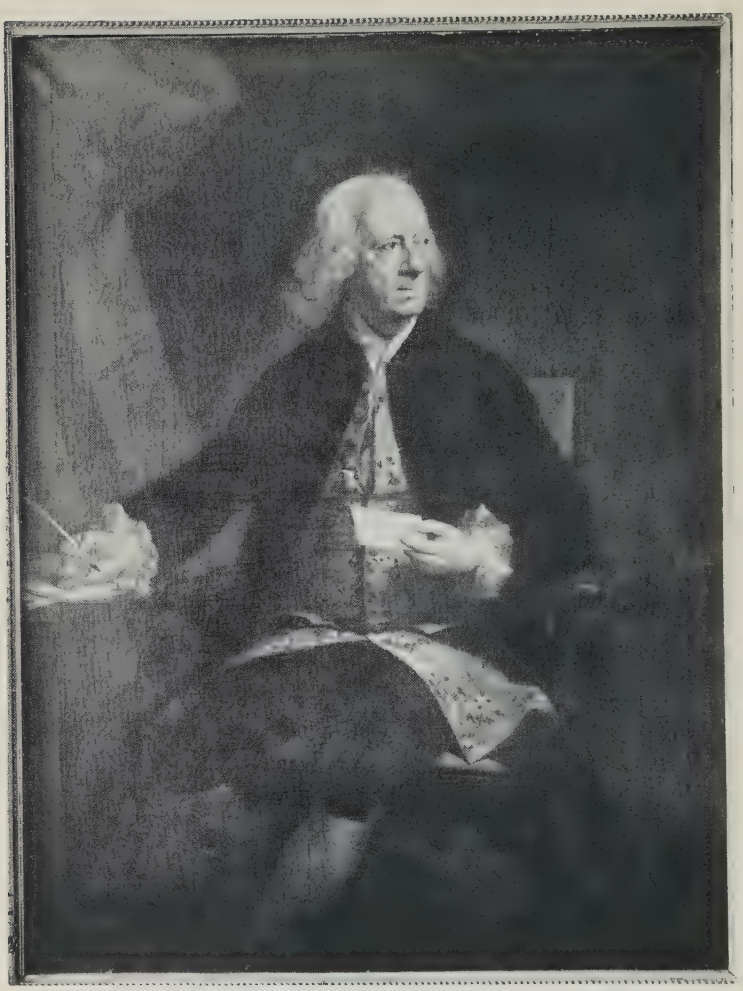
Thomas Andrew Knight married Frances, daughter of Humphrey Felton, of Woodhall, near Shrewsbury. He lost his only son as the result of a shooting accident, and with his own death in 1838 the elder branch of his family ceased. The Downton property passed, after a protracted lawsuit, to his second daughter, Charlotte, wife of Sir William E. K. Rouse-Boughton, with whose descendants, who added the name of Knight, it still remains.

This accounts for the family and fortune of the elder

[1] By whose kind permission it is reproduced. The present British Museum trustee is Charles Lewis William Morley Knight.

HAMPSTEAD
PUBLIC LIBRARIES

RICHARD PAYNE KNIGHT
1792
From a portrait by Sir Thomas Lawrence, P.R.A.



DANIEL CUNYNGHAME

branch. In the meantime Richard Knight's third son, Edward (1699–1780), had established a new iron industry and another line of the family, in Worcestershire. Sent by his father to acquire all that he could of the water-power on the river Stour, with the intention of converting the old corn-mills into ironworks, he was very successful, and bought up for his father the holdings of William Rea and those of the Jewkes family, then the principal family in Wolverley parish, near Kidderminster. He settled at Wolverley and managed the ironworks there, including Cookley Mill, Lord's Mill in Debdale, and Bouldon Furnace near Ludlow. He was a prominent ironmaster in the Stour district, and in 1757 gave evidence before the Committee on the Petition of Merchants and Ironmongers and several other petitions relating to the manufacture of iron, in the course of which he said that he made about 1,000 tons of bar iron per annum for the use of nail ironmongers, 'but at present meets with great complaints from them for want of demand for same, and he has lately seen great stocks of nails lying in the warehouses. . . . Mr. Knight said that he knew of his own knowledge that in the County of Salop woodlands have been stocked up and more land used for tillage than before 1718.'

He was succeeded by his eldest son, also Edward (1734–1812), who, dying unmarried, bequeathed his fortune to John, the elder son of his youngest brother, and it was to him that the Exmoor reclamation enterprise was afterwards due.

This was the stock from which John Knight descended, a family which, before his time and after, maintained an unbroken connexion with one of the fundamental industries of the country during some two hundred and fifty years, and contributed also, through some of its members, to its artistic life and rural development. From his mother's family, too, he may have derived some of the qualities which were disclosed in his career, for she was the daughter of Daniel Cunyng-

hame, of St. Kitt's, one of the pioneers of the sugar plantation industry in the West Indies.

John Knight, the maker of Exmoor, was born in the year 1765. It was a generation of agricultural improvers, and the agricultural revolution in England was yearly gathering force. 'Farmer George' was on the throne; Arthur Young was at the height of his activity as a writer; the Board of Agriculture was first constituted when Knight was twenty-six years of age. It is recorded of him that he was already farming largely in his native county, and that he had had a share in bringing under cultivation large tracts of its heathy commons before the time of his purchase of Exmoor. It is said that he had made a study of the methods by which Thomas Coke had turned Holkham from a rabbit warren into a fertile estate, and that he had been a guest at the Woburn sheep-shearings. When it is realized that agricultural experience of this extent was combined in him with force of character, tenacity of purpose, inherent familiarity with 'big business', and financial resources ample to stand the strain of a great adventure, some comprehension of the man and of his motives is obtained, and it is not difficult to understand that his imagination may well have been stirred by the opportunity, or it may have been the challenge, of an estate still in virgin condition—without roads, unfenced, without woodlands, untouched by the plough, and virtually uninhabited. Fairly judged, he stands out as one of the pioneers of his day, notwithstanding that his efforts may have met with no financial success and that their results were not realized in his own lifetime. Those, to-day, who laugh at some of his more extravagant schemes, know nothing of his journeys of hundreds of miles by coach to buy cattle to stock his land, of his eager search for lime with which to sweeten the sour soil of Exmoor, of his experiments to improve the live stock of the district, of the long process of trial and error by which the appropriate farming system was at length evolved. His letters disclose a knowledge and

an enthusiasm equalled by few and excelled by none of his class to-day.

John Knight married, first, Helen Charlotte, daughter of the Hon. Charles Hope-Weir of Craigie Hall, West Lothian, who died without issue, and, second, the Hon. Jane Elizabeth Winn, daughter of the first Lord Headley, of Aghadoe, Co. Kerry. By her he had three sons, Frederic Winn, Charles Allanson, and Edward Lewis, through the last-named of whom the family continues at Wolverley to-day; and three daughters, Margaret, Isabella, and Helen Georgiana.

After his purchase of Exmoor, John Knight made Lynton his head-quarters, living at what is now the Castle Hotel. It is said that his coach-and-four was the first ever driven up the old road there. About 1830 he took up his residence at Simonsbath House, the only habitation on Exmoor Forest before his acquisition of it, until, in 1837, he removed to Trinity Manor House, in the Island of Jersey, on account of his wife's health. Two years later the family went to Rome, where they lived in the Palazzo Bracci, Via Rassella. Mrs. Knight died there in 1841, and John Knight continued in Rome until his own death, in 1850. His eldest daughter, Margaret, married the Duke of Sermoneta, the head of a Roman family tracing its descent from classical times, and his third daughter, Helen Georgiana, married the Baron Karl von Kanitz, who was Prussian Minister at Rome at this time.

Frederic Winn Knight, the eldest son, upon whom was to devolve the task of completing the work begun by his father on Exmoor, was born in 1812. He was educated at Charterhouse, and much of his early life was spent at Simonsbath, he and his brothers entering fully into the social life of the very sporting community which inhabited North Devon in their day. All of them were noted men to hounds, and as such are commemorated in many stories and songs of the West. Frederic and Charles were members of the select fraternity who composed the South Molton Hunt Club

and made its head-quarters at the George Hotel for a fortnight in each season, during the 'fifties, to hunt the district with several packs. At this period the opening meet of the Staghounds was always held at Simonsbath House. Charles Knight, too, kept a pack of foxhounds, in Rome, for many years during his father's residence there.

Frederic Knight was a man of great determination and almost boundless energy. At a comparatively early age he had to assume control of his father's work on Exmoor, at a time when much still remained to be done and the prospect was obscure. 'I am 29 to-morrow', he wrote to his mother, at Rome, in May 1841, 'and my father has given me the entire management of the Forest.' At first he employed no agent, managing the property entirely by himself, as his father had done, and when the increasing calls upon his time, together with the forward policy which he decided to adopt in regard to Exmoor, made the task too great and he found it necessary to appoint an agent to assist him, he continued to retain a most active personal control. In the same year as that in which he took control of the Forest, he was elected member for West Worcestershire, the seat since held by Prime Minister Stanley Baldwin, which constituency he continued to represent in Parliament for forty-four years, the seat being contested on two occasions only during that period. He does not seem to have made any great mark in the House as a speaker and he never held any high office, but it is evident that he was recognized as a man of parts, and he was Parliamentary Secretary to the Poor Law Board in 1852, under Lord Derby's administration, and again in 1858–9.

He found time, also, to engage in commercial life in the City of London, becoming, in 1856, a director of the Bank of London and National Provincial Insurance Association. In this capacity he fell foul of some of his co-directors and officials as regards their financial dealings, and his circular to the shareholders on this occa-

sion, extending to twenty-six printed foolscap pages, is a refreshingly frank and unrestrained document, full of the most pungent criticism and giving evidence of his own capacity for business.

He was an enthusiastic supporter of the Volunteer movement, being associated with Lord Elcho in this matter, and the K.C.B. with which his public services were recognized in 1886 was due largely to his work in this connexion.

Throughout the whole of his life, following the death of his father, Frederic Knight was hampered by the want of adequate financial resources. He had been brought up in the expectation that the great fortune of his cousin, Thomas Andrew, of Downton, would eventually be his, but the Courts interpreted the will otherwise. Under his father's dispositions he found himself possessed of broad acres and little money, while substantial fortunes were the lot of his younger brethren, as happened not infrequently to the eldest sons of agricultural magnates in the nineteenth century. Many of the farms on Exmoor were coming in hand, and the estate was producing no net revenue; it had been heavily charged to raise money for the works of reclamation and improvement; there were large legacies to be paid and no liquid assets. There is no doubt that the energy with which he threw himself into the search for ironstone about this time, and his uncompromising insistence on his legal rights under the contracts with his mineral tenants, even after the uneconomic character of the venture had been pretty clearly established, were due to the paramount need for making the Forest a paying proposition.

Frederic Knight married, in the year 1850, Florence Marie, daughter of Edward Adolphus Couling Gibbs. They had one child, Frederic Sebright Winn, born in 1851, who died in 1879. It is said that his father's great interest in his work on Exmoor declined rapidly from that date, and in the same year he parted with the reversion to the estate for an annuity, which he lived

to enjoy for another eighteen years. He is remembered as a strict landlord and master, but he was just, and showed kindness and consideration in cases of need. 'If once he had confidence in a man, the world would not shake it.' All the time that he could spare from his other activities was spent at Simonsbath House, and he and his beautiful wife were always about the estate together. It is said that some of the cottages were built from Lady Knight's designs, and she seems to have shared to the full his deep interest in the estate and its development.

Frederic Knight died at Bath in 1897, six days before his eighty-fifth birthday. He was buried at Simonsbath in the grave in which his son was buried, and three years later Lady Knight was laid to rest beside them.

The tendency to-day is to criticize, if not to ridicule, the steps by which the Knights, father and son, attempted to reclaim the Forest, and to belittle the results that they achieved. Certainly this was not the attitude of their contemporaries, who knew them best, and who were best able to judge of the problem they undertook to solve. Throughout West Somerset none have stood higher in the public estimation, both as landlords and farmers, than the successive heads of the family of Acland, and as lessees and wardens of the Forest for three generations prior to its inclosure, they knew it as few others can have done. 'He will long be remembered', wrote Mr. T. D. Acland (afterwards 11th bt.) in 1850, on hearing of John Knight's death, 'as the first person who had the spirit to commence a great agricultural work which Mr. Billingsley foretold fifty years ago. . . . There are doubtless many difficulties in this, as in all great undertakings, and more than lookers-on are willing to allow. The present proprietor [Frederic Knight] is in a position not of his own choosing, but he wants neither the energy nor the will to do his duty in it, and to bring the Forest into a condition which an English gentleman may look upon with well-grounded satisfaction.'

HAMPSTEAD
PUBLIC LIB

THE HON. MRS. JOHN KNIGHT

LADY KNIGHT
1853

But the reclamation of Exmoor by the Knight family falls definitely into the category of schemes the value of which cannot be measured by their profit to the *entrepreneur*. They found a waste, and they and those who followed after them have established, in the place of it, a community of farmers as prosperous to-day, probably, having regard to the capital they have at stake, as any in the country. The Knights made roads, bringing this great tableland into communication with the surrounding country; they enclosed fields, built houses for those who should till them, and planted shelter-belts to provide 'succour' from the strong winds. They were responsible for the formation of the largest parish in Somerset, and for the erection of a church, parsonage, and school. They attempted other things which proved, some of them, to be unfruitful, others impossible—the erection of a great house, the utilization of storage water, the exploitation of minerals, the construction of a railway to the coast. Even the farming, successful as it is to-day, was the outcome only of many years of fruitless experiment directed towards the growth of crops which could not ripen at these altitudes and towards the maintenance of a class of live stock unsuited to the rigorous climate of Exmoor.

Still, the Knights' monument, *aere perennius*, stands out to-day clearly enough for those who have eyes to see it, in the homesteads and farm lands which they spread along the southern slopes of all the deep valleys intersecting the Forest; Tom's Hill and Larkbarrow; Warren; Pinkery, Driver, Titchcombe, Duredon, Simonsbath Barton, Cornham, Winstitchin, and Picked Stones; Cloven Rocks, Honeymead, and Red Deer; Emmet's Grange, Wintershead, and Horsen. It is by these that the contribution of father and son to the social and economic development of this part of West Somerset must be judged, rather than by the tale of their frustrate efforts and costly failures in other directions. To quote one of the older of its inhabitants, who can recall the later period of development, when the

mining and other extravagant ventures had passed and only the active prosecution of agriculture remained—'Exmoor misses Sir Frederic Knight to-day.' England now would be a happier, if not a richer, country if the spirit which actuated him, and his belief in rural industry as a thing fundamental to national prosperity, were still abroad in the land.

II

INCLOSURE AND SALE OF THE ROYAL FOREST AND THE BEGINNING OF RECLAMATION

THE story of the reclamation of Exmoor begins with the Act for its inclosure, passed in the year 1815. As a royal forest its existence extends backwards from this date, for a thousand years or so, into the time when records cease, and their place can be supplied only by conjecture. Its history has been twice told, first by Mr. E. J. Rawle, and fully and finally by Mr. E. T. MacDermot, from whose work have been derived the brief notes that follow, concerning the happenings between the inclosure enactment and the conveyance of the Crown allotment to John Knight.

For some two centuries the Crown had granted the Wardenship of the Forest on the system of lease and renewal on payment of a fine. One Robert Siderfin, of the Middle Temple and of Croydon, in Carhampton, was lessee and warden in the early part of the eighteenth century, and it may be of passing interest to agriculturists to record that he married, for his third wife, Anne, daughter of Sir John Wittewronge, first baronet, of Rothamsted, Hertfordshire, who was the great-great-grandfather of Sir John Bennett Lawes, founder of the Rothamsted Experimental Station.

Siderfin was followed, first, by the son and, next, by the grandson of Prime Minister Walpole, and in 1767 the grandson, the third Lord Orford, sold his interest to Sir Thomas Dyke Acland, seventh baronet, with whose descendants the wardenship remained until 1st August 1814, when the current lease expired. Before this date the then lessee (the tenth baronet and the third Sir Thomas) had made application, on two occasions, for a new reversionary lease, suggesting in the alternative, that it might be more advantageous to the Crown to

dispose of the freehold, in which case he hoped to become the purchaser.

The administration of Crown Lands at this time was in a state of flux, but in 1810 Parliament had passed the Act by which the Commissioners of His Majesty's Woods, Forests, and Land Revenues were brought into being, and it fell to them to deal with the application. Their first step was to cause a survey of the Forest to be made, and they presented their first report on 30th June 1814, two months before the expiration of the Acland lease. It is full of information on the condition of the Forest at that time; the stock agisted, and other income; the outgoings on rent, taxes, and wages (no other expenditure had been incurred in the previous six years); the rights claimed by individuals to depasture stock, to cut fuel and litter, &c.; the ownership of the tithes. The Commissioners concluded their report by summarizing the alternatives open to the Treasury as to the future of Exmoor, namely:

'1st. Whether to grant a new Lease of it to Sir Thomas Acland, upon terms founded on the above-mentioned valuation of Mr. Hawkins, the effect of which would probably be to continue the Forest in its present unimproved state, to be used for depasturing sheep, cattle, and horse thereon, as heretofore.

'2nd. To dispose entirely of the Crown's Rights and Interests in the Forest, either by private contract to the present Lessee or by public auction . . . Or,

'3rd. To endeavour to procure an Act for the Inclosure and Division of the Forest, stipulating for an adequate allotment thereof to the Crown, in severalty, in lieu of His Majesty's Rights and Interests therein, such allotment, or such portions thereof, as may be found to be adapted to the growth of heavy Timber, to be afterwards appropriated to that purpose, or to be disposed of by Sale, and the Money appropriated to the purchase of other Land for the growth of such Timber, as may be then considered to be most advisable.'

The Commissioners gave a clear indication that they themselves inclined to the third alternative, and it is of interest to note that they say that local opinion round Exmoor was not only in favour of inclosure, but also expecting it. Sales of land which carried rights on the

Forest, they state, had taken place at figures based on this assumption.

The Treasury adopted the inclosure suggestion, and in 1816 the Commissioners reported that, acting on this, they had 'proposed terms to the several noblemen and gentlemen principally interested', and that, after a meeting at South Molton to discuss them, it was agreed to introduce a bill by which Inclosure Commissioners should be appointed to survey and value the Forest, and, after setting out lands for the repair of roads and watering-places for cattle, to allot the remainder to His Majesty, to Sir Thomas Acland, and to such other persons who had made good their claims to rights on the Forest. The King, it was agreed, was to have an allotment equal in value to twelve twenty-second parts, and Sir Thomas Acland, the owner of the tithes of the Forest, which his father had bought in 1790, one of one-eighth part in lieu thereof, leaving, approximately, one-third part for all the other parties.

The Commissioners added that the Act to give effect to these proposals had already been passed,[1] and such progress made as to enable the Inclosure Commissioners to set out the various allotments by the summer following (1816). Under the Act, the Commissioners for the inclosure were to settle and define the boundaries of the Forest, to set out the public highways, quarries for their maintenance, and watering-places for common use by stock belonging to future occupants of land upon the Forest. They were next to value the whole of the Forest, and to allot the portion accruing to the King 'as near to the centre of the said Forest as conveniently may be'. They were then to prepare their first award, which was made in October 1817. This done, the Act directed that they should allocate to Sir Thomas Acland one-eighth part of the whole in lieu of his freehold tithes, and this allotment was to be as near to his other property

[1] 'An Act for Vesting in His Majesty certain parts of the Forest of Exmoor otherwise Exmore, in the Counties of Somerset and Devon; and for inclosing the said Forest' (4 July 1815).

in the neighbourhood as possible. The free-suitors of Hawkridge and Withypool were next to be considered, and the residue of the Forest was to be divided between the other suitors, owners of the old-inclosed tenements in the several parishes named in the preamble to the Act (27 in all), who had been accustomed to depasture sheep upon the Forest at less than the full toll of fivepence per head.

The second and final award, dealing with these allotments, was made in the spring of 1819, and with it Exmoor ceased to exist as a royal forest. The survey made under the Inclosure Act had disclosed its total extent as being 20,122 acres, contrasted with the Ordnance Survey figure of 20,344 acres for the present Parish of Exmoor, which is co-terminous with the old Forest. This was exclusive of Simonsbath Farm, of 108½ acres, which was reserved, under the Act, from the jurisdiction of the Commissioners, so that the discrepancy is reduced to 114 acres. The King's Allotment was 10,262 acres; Sir Thomas Acland was allotted 3,201 acres in lieu of tithes, and the only other individuals to receive allotments of more than 100 acres were: Sir Charles W. Bamfylde, 1,880 acres; Thomas P. Acland, 560 acres; Mrs. Blathwayt, 365 acres; Earl Fortescue, 248 acres; Lord Clinton, 183 acres; Lord Morley, 183 acres; John Lock, 183 acres.

Before the appearance of the final award, the Commissioners of Woods and Forests had taken action on the first award by the sale of the King's Allotment. In June, 1818, they advertised that:

'Such persons as are desirous of purchasing an extensive tract of WASTE LAND are hereby informed that the Allotment made to His Majesty on the FOREST OF EXMOOR, in the Counties of Somerset and Devon [*sic*], consisting of about 10,262 Acres, together with an inclosed Farm of 108a. or. 2p., will be DISPOSED OF by Public Tender for the Highest Price offered for the same, above a certain sum to be previously named and deposited under a sealed cover to be opened at the same time with such tenders as may be received. And Persons who may be desirous of becoming Purchasers of the Lands in question, are requested to send in their Tenders to the said Com-

Plan of Exmoor Forest 1816

E.

missioners on or before the 23rd day of July next, sealed up and indorsed "Tenders for purchasing the Exmoor Allotment", and stating in words at length the sum they are willing to give.'

Tenders were to be opened at the offices of the Commissioners on the date named above. Seven tenders were received, but the names of all those tendering and the amounts they offered are not now recorded, though it is commonly reported that Earl Fortescue was the second highest bidder, and that Sir Thomas Acland, who was the last lessee of the Forest and who had acted as forester on behalf of the Crown since the termination of his lease in 1814, put in a bid of £5,000. The highest tender was that of John Knight, of Wolverley Hall, Worcestershire, and 52 Portland Place, London, who offered £50,000. His purchase was recorded in the local press in August, 1818:

'Mr. Knight of Worcestershire has purchased the allotment (10,000 acres,) given in right of the Crown, on Exmoor Forest, for £50,000. The property is near Simonds-Bath; and the greater part is to be inclosed by a wall, in the centre of which a handsome residence is to be built. The spot affords great facilities for this purpose, and will, under the judicious plans in contemplation, become an enviable possession.'

In the following year John Knight added to his estate by the purchase of Sir Charles Bamfylde's allotment of 1,880 acres to the south-west, and, soon after, he paid 5,555 guineas for Sir Thomas Acland's allotment of 3,200 acres. Thus he entered upon a possession of more than 15,000 acres. The conveyance of the Crown estate was not completed until 15th March 1820. Simonsbath Farm was conveyed separately from the rest, out of which, twelve acres, already staked out, were reserved to the Crown, in accordance with the Inclosure Act, as provision for a church, churchyard, parsonage house and homestead, if and when the Forest became inhabited and the necessities, spiritual and temporal, of its inhabitants required it. The Forest was extra-parochial, and the Act provided that on the erection of a church and parsonage &c., the district should become a distinct

parish of itself, to be called by the name of the Parish of Exmoor. These things all came to pass in 1856.

Lastly, Mr. Knight applied to the Commissioners of Woods and Forests to treat for the rights of the Crown to any mines or minerals which might be under Sir Charles Bamfylde's allotment, such rights being reserved, as they were in all similar cases, to His Majesty. The Commissioners, after inquiry, decided correctly, as has since appeared, that these rights were of merely nominal value, and sold them to Mr. Knight 'for one year's rent of the land, which has been reported to us to be about 3*s*. per acre'. They were not conveyed, however, until long after his death, that is to say, in 1855, when his son, Frederic Knight, was engaged in an attempt to develop the mineral resources of Exmoor. The question was also raised as to whether there had been any reservation by the Crown of the minerals under the King's Allotment, but it was decided to treat them as being included in the conveyance to John Knight.[1]

The stage was now set for the reclamation and settlement of the Forest, and it is interesting to note how this step had been anticipated for some time in the locality. There is the evidence contained in the first Report of the Commissioners of Woods and Forests in 1814, quoted above, to the effect that the inclosure of Exmoor was generally desired and expected on the termination of the Acland lease, and inclosure was generally the prelude to improvement. But twenty years before this, the possibility had been foreseen by John Billingsley, when engaged upon his survey of Somerset for the Board of Agriculture. 'A very large proportion of the whole', he says, 'needs but the spirit and fortune of some one or more of our wealthy gentlemen of England, whose attention, if turned this way, sanctioned by the royal proprietor, would render the Forest of Exmoor in a few years as fair a prospect as the surrounding country, and

[1] For a full account of the final inclosure of Exmoor Forest, see MacDermot, ch. xv (pp. 406–40), from which this brief summary of the principal events has been abstracted.

not a useless and void space in the map of the County of Somerset. Excepting for a few willows and thorns by the sides of the rivulets, not a tree or a bush is to be seen on the whole Forest, but plantations of most kinds need no more shelter nor better soil than is met with here. Let there be a small town or village erected near the middle, suppose by Simonsbath, which should form proper residences for artificers and husbandmen employed in building farm houses and enclosing many a considerable estate around them.'

Billingsley was right as to the treelessness of Exmoor, for the Commissioners' survey, made in 1814, disclosed only thirty-seven trees, all of them growing round Simonsbath House. But he was overstating his case when he described the Forest as a useless and void space. For long years it had been the practice to depasture sheep, in large numbers, and a few cattle and ponies on it during the summer season, and this constituted its only value beyond anything which it may have been worth for sport. At Simonsbath, a house and homestead had been built and a few fields inclosed along the Barle, in or about the year 1654. The house came to be the residence of the deputy-forester and to be licensed as an inn; the farm attached to it extended to 108 acres. No other house had been built, nor any further inclosures made up to the sale of the King's Allotment to John Knight, but from about Lady Day onwards, in every year, flocks of sheep were to be seen converging slowly on Exmoor, for the summer grass, by every road and trackway in North Devon. They came from more than half a hundred parishes, to the number of many thousand head. In Sir Thomas Acland's last annual account, 1816–17, for the years during which he acted as forester for the Crown after the expiration of his lease, the number accounted for is just short of 25,000, exclusive of flocks belonging to the free-suitors. North Molton, with a total of 3,609, furnished the largest parish contribution, whilst a Somerset farmer, Thomas Rawle, of Porlock, with

a flock of 569, made the largest individual entry. Almost every well-known name in North Devon and West Somerset is to be found in the record. There are Buckinghams, Clatworthys, Comers, Crangs, Goulds, Huxtables, Mogridges, Muxworthys, Passmores, Ridds, Shoplands, Sladers, Sloleys, Tamlins, Thornes, Webbers, and Westacotts, whilst some of the neighbouring clergy, who farmed their glebes, availed themselves also of the Forest grass, amongst them the Rev. J. Blackmore, rector of Charles, uncle of the author of the great Exmoor epic.

MacDermot relates that it was the custom for flock-masters to enter their sheep with the deputy-forester at the various markets around the Forest, in the early part of the year. They remained on Exmoor until June, when they were taken off, by their owners, for shearing, and tellers were appointed to watch the roads and take a count of the sheep as they passed. The various owners, the numbers of their sheep, and the parishes to which they belonged were then entered up, and the sums payable for agistment by each was calculated. The sheep were returned to the Forest after shearing, and remained until autumn, when they were driven off to the farms whence they had come.

There were no boundary fences round the Forest, its borders being identified by watercourses, boundary stones, barrows, and such-like landmarks. Thus, the sheep were apt to range on to the adjoining commons, and these were driven, from time to time, to round up the strays. The standard charges, for the season's agistment and for such services, were 5*d*. per sheep for ordinary persons, 2½*d*. for sheep the property of Forest borderers, whilst those belonging to the free-suitors paid nothing. Similarly, the fees for ponies were 4*s*., 2*s*., and *nil*, but in numbers these were relatively few. The accounts for the season 1817, the last, or the last but one, before John Knight took possession, which were presented to the Commissioners by Sir Thomas Acland on the 5th October 1818, run as follows:

FOREST OF EXMOOR

'Acc^{t} of Will^{m} Lock, Deputy Forester, concerning Sheep and Colts Ent^{d} to pasture on the Forest of Exmoor, beginning Lady Day 1816 and ending Lady Day 1817.'

There follows a complete statement of the farmers entering sheep and colts, the numbers entered, and the numbers told, all grouped under the parishes from which they were sent. The total amount due and received for the pasturage is carried to a Receipts and Payments account, the balance of which gives the net income of the Forest for the year (*see next page*).

The net income of £259 11*s.* 6*d.* is somewhat lower than the estimate of the Commissioners' Surveyor made in 1814, and there seems no doubt that the numbers of sheep entered to pasture in 1817 were lower than oftentimes before. MacDermot gives figures for earlier times which run up to 30,000 sheep, 177 beasts, and 102 colts, exclusive of animals belonging to the forester and to the free-suitors. But Sir Thomas Acland's tender of £5,000 for the King's Allotment, on the inclosure of the Forest, was based, evidently, on the net income according to the last account, capitalized at twenty years' purchase.

By the spring of 1819, John Knight was making his arrangements for the development of his property, and while his first works of reclamation were in progress it is evident that he continued to make the Forest available for grazing. An advertisement in the *Taunton Courier* of the 22nd April 1819, signed by him, notified the times and places at which attendance would be given for receiving and entering names, and numbers of sheep. The price for each sheep was raised from the old rate of 5*d.*, at which it had remained since 1655, to 1*s.*

The purchase of the Crown Allotment was completed on the 15th March 1820. Twelve months before this, John Knight had bought Sir Charles Bampfylde's allotment, and not long after it he also purchased that of

FOREST OF EXMOOR IN THE COUNTIES OF SOMERSET AND DEVON

The Account of Sir Thomas Dyke Acland, Baronet,
the Forester as to the Rents and Profits of the Said Forest from Lady Day 1816 to Lady Day 1817.

CHARGE.			£	s.	d.
1818					
Received for Pasturage of sheep	388	17 4½			
Deduct as usual for Tithes at the Rate of 4s. in the Pound	77	15 0			
			311	2	4½
Received for Pasturage of Colts		10 0			
Deduct as usual 1s. 8d. in the Pound for Tithes		10			
				9	2
Chief Rent			3	7	8½
Amerciaments				9	0
A year's Rent of Symonbath House and Lands			35	0	0
			350	8	3

DISCHARGE.	£	s.	d.
1818			
Expenses of drifts and driving the Commons adjoining the Forest. (No Voucher.) Same as in preceding year	8	18	6
Tellers	10	10	0
Helpers. (No Voucher.) Same as in preceding year	2	18	9
Poundherd, a year's Salary to L. Day 1817	2	0	0
Repairing Pound Wall		10	0
Repairing Roads on the Forest		14	0
Expenses of Forest Court	10	1	0
Repairs of Simonsbath House	4	14	6
Wm. Lock, the Deputy Forester, 1 year salary to Lady Day 1817. (No Voucher.) The same as in preceding years	40	0	0
Mr. John Day two years Salary for holding Swainmote Court, receiving and transmitting Rents, Postage of Letters, and Carriage of Parcels to Lady Day 1817	10	10	0
	90	16	9
Balance	259	11	6
	350	8	3

3,300 acres, made to Sir Thomas Acland, and the adjoining manor of Brendon which carried with it the owner's (Sir Arthur Chichester's) allotment on Exmoor. Several of the smaller allotments were also bought, and in all he acquired about 15,500 acres formerly part of the old Royal Forest.

The process here was similar to that which must have occurred all over England upon the inclosure of wastes. The stages by which the small allotments to many individuals, in lieu of rights of various kinds, became assembled into farms of every size, equipped with homesteads, fences, &c., and the farms themselves into the great estate, giving rise to the landlord-and-tenant system of land tenure as it manifests itself to-day, have never been traced, in particular cases, to illustrate that which is known to have occurred. There is ocular evidence of the aggrandizement of farms and of estates which took place during the period, and the causes of it, if not the processes by which it was achieved, are pretty clearly established. 'The social advantages of landownership continued with high profits to give land a fancy value. Yeomen consulted their pecuniary advantage by selling their estates; capitalists gratified both their tastes and their speculative instincts by buying land. The purchasers were not yeomen, but neighbouring squires or successful manufacturers. Everywhere large landed properties were built up on the ruin of the small landowner.' What was true of the yeoman, in many cases, was even more general in the case of the recipients of small allotments of land upon inclosure, as in many instances the utility of their new possession bore no relation to that of the one formerly enjoyed, even though the money values were identical. Thus, the right to graze a cow upon a common found no equivalent, in utility, in the allotment of an acre or two of land, always unfenced and often remote, and it is no wonder that purchase and absorption by larger neighbours was the rule. The large tenant farmer and the labourer replaced the yeoman and the tenant of the

common lands, while the profits of industry and commerce found an outlet for investment in the assembly of large estates built up out of the ruins of the old land system.

Although the Royal Forest of Exmoor bore little resemblance to the more fertile fields of rural England, it affords an example of the consolidating process which was going on all over the country. The free-suitors' rights to depasture stock were met, upon inclosure, by the allotment of Forest land of the average extent of thirty-one acres to each, but it must be obvious that a plot of this size was no equivalent for the right of the allottee's flock to range the Forest at large, and Exmoor shared the common experience, in such cases, through the sale or abandonment of the useless exchange.

'Except that the prices of labour and live stock were low, the moment did not seem favourable for a great reclamation scheme. The long wars that sprang out of the French Revolution of 1789 had been closed at Waterloo; war prices for corn had only been temporarily sustained by two bad harvests; but the War taxes remained, and threatened to be increased by an approaching return to cash payments. Wheat brought 5*l.* a quarter in 1814, and was only 40*s.* in 1822; while beef in Newgate Market was quoted from 2*s.* 4*d.* to 3*s.*, and mutton at 2*s.* to 2*s.* 10*d.* per stone.'

The earliest work set on foot was the construction of the boundary wall with which John Knight encircled the whole of his acquisitions upon the Forest. It has a total length of about twenty-nine miles, and it must have been completed before the end of 1824, for in November of that year 'Nimrod', writing of Exmoor, remarks that 'a gentleman of Worcestershire, by the name of Knight, having purchased it on a speculation, he has built a high wall round it, which somewhat obstructs the stag-hunting'.[1] Several of the old boundary marks of the

[1] At a later date, Mrs. Jack Russell once pounded the field at the boundary fence by Red Deer, when hunting with the members of the South Molton Hunt Club.

Forest seem to have been absorbed or converted in its construction, being regarded, no doubt, as obsolete.[1]

Another work taken in hand at once was the construction of roads. Like all the improvers of his day, John Knight was a great road-maker. The obstacles to development of the country-side presented by difficulties of communication, even so late as his time, are not always realized. The writings of Arthur Young and of his contemporaries are full of references to the evil condition of the roads, and many villages were practically cut off from communication with the outside world, so far as concerned the transport of goods, for six months of the year. 'Food', Lord Ernle has recorded, 'rotted upon the ground in one parish, while in the next there was a scarcity.' Most of the main roads had been put in order by the end of the eighteenth century, but the parish roads remained, for the most part, impassable except for horsemen, during the winter months, until long after this date. 'People now living', wrote Albert Pell, in 1899, 'may have seen decaying under the walls of a parish church the enormous wooden plough, girt and stayed with iron, which, as spring approached, was annually furbished up and brought into the village street. For this the owners and their tenants, acting in concert, made up joint teams of six or eight powerful horses, and proceeded to the restoration of their highways, by ploughing them up, casting the furrows towards the centre, and then harrowing them down to a fairly level surface for the summer traffic.'

There were no roads on Exmoor at the time of the disafforestation. The Inclosure Award was accompanied by a map, which set out a number of roads following,

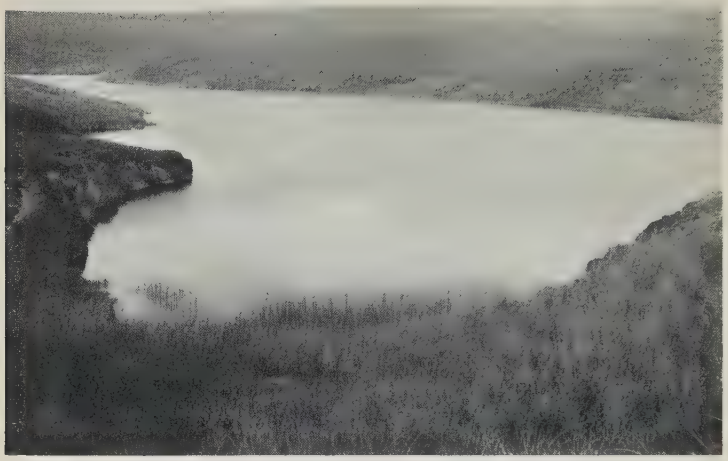
[1] Where the roads cut the wall, gates were placed to prevent the straying of live stock. Between Red Deer and Honeymead, on the Exford road, and on the Forest boundary on the Brendon road, if not also at other points, ingenious double gates were erected. They were hung on opposite sides of the same hanging-post, and they closed, without fastening of any kind, against the same clapping post. Thus, they were easy to pass, and a wind that might blow one of them open would keep the other closed. Honeymead Two Gates were removed long since, when the fields adjacent were fenced; Brendon Two Gates have only now been abolished during the widening of the road from the Exe Valley to Lynton.

in almost every case, the trackways already existing. No obligation was imposed on those obtaining allotments, nor on the purchaser of the King's Allotment, to make these roads, nor have all of them been made to this day, but John Knight set to work, and metalled those from Exford and Sandiway to Simonsbath, and thence towards South Molton and Brendon. Not only this, but he stirred up the farmers and others in the country round Exmoor to do likewise, convincing them of the advantages to themselves of better means of communication, and so his own good roads were linked up with the main arterial highways in the low country, and access to his moorland estate was secured. The new road leading to Lynmouth (the Brendon Road) is mentioned in a record of a run with the North Devon Staghounds, in September 1828. The road over Challacombe Common was not taken seriously in hand until some twenty years later, when Frederic Knight, as agent for his father, was getting large quantities of lime from the Combe Martin kilns, and sought to reduce the cost of transport by making up the road. Mr. A. G. Bradley, writing of the early 'sixties, and commenting on the excellence of the Challacombe–Simonsbath road, describes John Knight as 'the most famous faddist and experimenter that the West-country ever knew', and says that the only useful marks left by him on Exmoor were the roads he made, which had never been called upon to carry any traffic to speak of. But this view seems to overlook the immediate object of this road, and also the conditions of transport and communication in general, off the main roads, in the early part of last century—not to mention the ultimate value of the land reclamation initiated by John Knight and completed by his son, which could not have been realized without the roads.

One of the ancient trackways, which came from the Midlands, through Gloucester and Bristol and so to Bridgwater, over the Quantocks, on to Exford, Simonsbath, Barnstaple and into Cornwall, may still be traced

HAMPSTEAD
PUBLIC LIBRARY

EXMOOR ROADS AS JOHN KNIGHT FOUND AND MADE THEM



PINKERY POND

THE CANAL FROM PINKERY POND

on the Forest in a portion rendered obsolete by the construction of the Simonsbath-Challacombe road. This length starts opposite to Driver Cot, crosses the Barle and continues by Great Vintcombe to Mole's Chamber, whence it goes on as a parish road. In the accompanying illustration of it, the alternative tracks may be discerned, a new one being made as an older one became impassible, and they give some idea of the difficulties of travel no more than a hundred years ago.

Altogether about twenty-two miles of public roads were made by John Knight within the Forest. It is to be inferred that his plans for developing the estate were made, to a large extent, before the purchase, for the announcement of his acquisition of the King's Allotment in the local press was accompanied by the statement of his intention to build a residence in the centre of it, and by other indications of works subsequently carried out. He spent much of his time on Exmoor, living, as already related, first at Lynton and later at Simonsbath House, and superintending all the operations in progress. The mansion was begun, at the back of the old house, and there is a story in the family that it was his intention to dismantle Wolverley House to provide timber and fittings for it, but it had not been completed when he left Exmoor to reside in Rome, and it stood for more than sixty years in the condition in which it appears in the illustration facing page 103. It was pulled down in 1899. As an appendage to the house, though not immediately adjacent to it, a large deer-park was inclosed adjoining the South Molton road, and numbers of fallow deer were enlarged upon it.

A work much more difficult to understand was the construction of Pinkery Pond. John Knight dammed up the headwaters of the Barle, at the foot of the great bog known as the Chains, making a reservoir some seven acres in extent and some thirty feet in depth at its lower end. Although it is no more than a hundred years ago, there is no record nor any positive tradition of the purpose of this storage water, and Mr. A. G. Bradley

mentions that so long ago as the 'sixties of last century no one could tell him of the object with which the pond was made. A small leat runs from it down the valley towards the present Pinkery Farm, and a much larger channel, the so-called canal, can be found starting near the pond, though never connected to it, which runs, carefully contoured, across the country for a considerable distance in the direction of Simonsbath. That this canal was intended for the conveyance of water from the pond is obvious, but the use to which this water was to be put remains uncertain. This was an age of great activity in the construction of canals, as well as of roads—the Bridgwater Canal, for example, had not been finished many years—but it is difficult to believe that John Knight had serious thoughts of providing water transport from this comparatively insignificant source. Nor is the suggestion that the pond was intended as a source of water-power, for mining, much more probable; the only iron ore known to exist in his time was never worked, and it occurs lower down the river, where, except in a long summer drought, power would have been available at much less expense. A more likely suggestion is that Pinkery Pond and the canal were constructed to provide irrigation water for the long stretch of land from Pinkery Farm to Honeymead, but that its peaty nature made it unsuitable for this purpose and led to the abandonment of the project. The work of construction was carried out by a party of two hundred Irish labourers. The story has been handed down in the family that the canal, or drain, was never connected to the pond because they worked to the wrong levels, and, if completed, it would have tapped the pond too high.

It is stated, sometimes, that John Knight engaged in mining on Exmoor. It is true that he had acquired the mineral rights of the Crown, and, as an ironmaster himself, he might well have been interested in such a venture, but he made no attempt to exploit the minerals on the estate, though a few years before his death, and

long after he had retired from Simonsbath to Rome, he granted a mining lease to a small syndicate.

As regards work more definitely agricultural, the boggy nature of so much of the land, due to a thin, clay-iron pan just below the surface, at once suggested the need for drainage. As will presently appear, the effective solution of the drainage problem was found in subsoil ploughing, to break the pan, but John Knight and, more particularly, his son, attempted the removal of water from large tracts by cutting surface drains. On Great and Little Buscombe, Trout Hill, East and West Pinford, and The Chains—to mention some of the areas—many miles of these drains were cut, and, though they failed completely in their purpose, they remain to this day, to the discomfiture of the unwary staghunter who attempts to cross them. Most of this work, however, belongs to the period following John Knight's management.

John Knight seems never to have realized the effects of the great elevation of Exmoor on its climate. Almost the first steps in any works of reclamation should have been the formation of woods and shelter-belts, to break the force of the wind and give protection to live stock and crops. But very little planting was done in the early years, the twenty-six-acre plantation known as Birch Cleeve being the only one formed prior to the year 1840.

III

1820–1841. DEMESNE FARMING

THE progress of farming on Exmoor is divided into periods, more or less sharply defined, by the changes in policy which experience necessitated from time to time. As already mentioned, John Knight continued the old practice of taking in lowland stock for summer grazing on Exmoor, after his purchase of the property, but he had not acquired the Forest for the purpose of carrying on no more than the traditional pastoral industry. Farming on a large scale was his object. He was his own agent, organizing and superintending the works of reclamation upon which he resolved, and at a very early date he had begun to plough the land, with the object of bringing it into rotation farming. Exmoor may be described as a great tableland, which is traversed by four considerable valleys, running, for the most part, from west to east. Near its southern border there is the valley through which flow Kinsford Water and Sherdon Water; north of this is the valley of the Barle, a wide and deep depression which runs from one side of the Forest to the other; north again is the valley carved out by the Exe, above Simonsbath and Honeymead Allotment; finally, the headwaters of Badgeworthy Water, flowing in the opposite direction but still following, more or less, a course east and west, have opened out a valley near the northern border of the Forest. If any cultivation was to be done it was natural that the southern slopes of these wide valleys would suggest themselves for the purpose, and John Knight selected the widest and longest of them, that of the river Barle, for his first operations. There were already at Simonsbath old inclosures of some 108 acres, which formed the farm attached to the only house on the Forest, and east and west of these, at Honeymead and Cornham, he began to break the ground. All this land consisted of 'forest

grass', for it is a remarkable thing that there is practically no heather on the Forest, and the boundary, which was a purely arbitrary one judged by all surface indications, marks almost to a yard the division of the sedge land from the heather. No positive explanation of this fact can be given, but Professor R. G. Stapledon writes that 'it is a fact that under grazing, particularly by cattle, heather is destroyed to a considerable extent, and if destruction were started many years ago, even though intensive grazing be not maintained, the ecological balance having been once upset would have let in the grasses, altered the whole trend of competition, and left an effect for a long time. It is an ecological fact that grass-heath tends to arise, in substitution for heather-heath, when heather-heath is used as fairly intensive grazing land.' Thus, it may be that the regular yearly stocking of the Forest through two centuries or more, in contrast with the casual grazing of the adjoining commons, may have resulted in the difference in the character of the herbage which is so notable to-day.

The forest soil is of two types. About one-half of it, which is naturally dry, consists of a brown loam covering a deep, yellow subsoil, the debris of the soft Devonian clay-slate rock which underlies it. An analysis made at a later date (about 1850) by J. C. Nesbit showed the following composition:

Exmoor Dry Land

	Per cent.
Moisture	28·16
Organic matter	11·90
Siliceous matter (insoluble)	55·74
Oxide of iron and alumina, with trace of phosphoric acid	3·89
Lime	0·12
Magnesia	0·12
Soluble alkaline salts	0·07
	100·00

Nitrogen (equal to) 0·56 per cent.
Ammonia 0·68 „ „

Some five and twenty years later, the 'dry' soil of Exmoor was analysed by Dr. Voelcker, his figures

differing from those of Nesbit partly for the reason that his sample was dried at 212° before analysis:

Exmoor Dry Land

	Per Cent.
Organic matter and water of combination	14·11
Insoluble siliceous matter	82·45
Oxide of iron and alumina	1·43
Phosphoric Acid	0·29
Lime	0·19
Magnesia and Alkalies	1·49
Sulphuric Acid	0·04
	100·00

This soil, which occurs for the most part on the sides of the valleys, has a natural drainage, and requires nothing more than the addition of lime to make it fertile.

The other half of the Forest is covered with a thin clay-and-iron pan, quite impervious to water, on which the growth of centuries has laid a shallow layer of peat. For the greater part of the year these peat soils are saturated with water, like a sponge, and they form a strong contrast to the dry Exmoor land, by which heavy rain is absorbed almost as quickly as by a New Red Sandstone soil. Where the pan exists, the water cannot penetrate to the pervious subsoil. Dr. Voelcker's analysis of the soil and of the pan, both dried at 212°, was:

Exmoor Wet Land and Pan

	Wet Land.	*Clay Pan.*
Organic matter and water of combination	28·40	9·90
Insoluble siliceous matter	69·50	86·01
Oxide of iron and alumina	0·97	3·38
Phosphoric Acid	0·15	0·14
Lime	0·05	0·08
Magnesia and Alkalies	0·90	0·47
Sulphuric Acid	0·03	0·02
	100·00	100·00

Bullock-teams, in yokes of six, supplied the power for the cultivation of the land, which had never before been moved by man. The first operation performed was 'spading', which consisted in paring off two or three inches of the top layer of turf with a broadshare. 'Burning' followed, this top layer being got together

in heaps, burnt, and then spread. The next step was 'liming', for John Knight well knew the virtue of this aid to soil improvement, and he recognized, from the first, that these acid soils, full of the vegetable accumulations of centuries, could never become productive without liberal dressings of lime. Three tons to the acre was the amount applied in later years, but there is no record of the quantities used in those days. Then came the first ploughing, known, from the method of execution, as 'halving'. The bullock-teams were put on to plough every alternate furrow-width, the furrow-slice being turned over on to the unploughed strip beside it. As to the depth of the furrow, this was determined by the depth of the soil, and where there was no pan the general instruction was to let the plough in 'till the soil turned up yellow'—to secure that the yellow subsoil was reached. Where the thin clay and iron pan prevailed, the plough was followed by subsoiling, only every alternate furrow being so treated, as the disturbance thus created was found to suffice. The land was then left, in the low ridges formed by the half-ploughing, until the following spring, when it was ready for spring cultivation and sowing.

The effect of this work on the drainage and the texture of the soil was immediate and permanent. It is well illustrated by the condition of the land to-day in many places, as, for example, on either side of the South Molton road, by Emmett's Grange. On the south side of the road the land was first reclaimed, by processes similar to those described above, in or about the year 1848—on the north side it remains in its native unreclaimed condition. When examined recently during a wet autumn spell, the natural land overlying the pan, on the higher side of the road, was standing in water, whilst the improved field, at the lower level, was no wetter than the recent rainfall would have rendered any land. Seventy-five years before, the same spot had been examined by an earlier visitor, who remarked that 'wild moorland and high cultivation may be found

divided only by the carriage way—on the one hand fields of crops worthy of the Lincolnshire Wolds, on the other the brown and purple moor'. By common consent, land that has once been broken never reverts to sedge, and white clover comes naturally on Exmoor after liming.

How much land was broken and brought into cultivation in this way by John Knight, during the period under review, has not been determined, but it was very considerable, and 2,500 acres is the figure mentioned by Frederic Knight, in 1845. Homesteads were built at Cornham and at Honeymead at an early date. A correspondent of the *Sporting Magazine*, in 1824, mentions 'the disafforestation of Exmoor and the enclosure and cultivation of very large tracts of country' as a cause of shortage of deer, and mention occurs of Cornham Farm in an account of a run with the North Devon Staghounds, in September 1828, during which the stag 'crossed Mr. Knight's farm to Cornham House, where he was headed by some farm people'. What is certain is that his object in cultivating these parts of the Forest was to introduce the improved courses of husbandry with which he had made himself familiar in the Midlands. Having pared and burnt the surface, limed the land, and broken the pan, where necessary, he proceeded to farm on the four-course system, and right away up to the year of his death the attempt to grow barley and wheat, with the help of turnips and sheep, under the impossible climatic conditions of Exmoor, continued. 'We have magnificent oats, fine turnips and barley and spring wheat—winter wheat rather a failure'— wrote Captain Lewis Knight, from Simonsbath, to his father in Rome, in August 1849, but the number of seasons of which so much could be said must have been few.

The greatest expense, probably, was the provision of lime. Without it, any cultivation was useless, and a diligent search was made on Exmoor for local sources of supply. In 1829 it was thought that limestone had

been found, and Lord Headley, having been notified of this discovery, so important to the development of the Forest, replied that it gave him 'great pleasure to hear that it had been found in such abundance. I hope it is near the fuel or turf—in case it is, you may say the Peat is the most valuable part of the purchase—but having found lime at all in any large quantity in my view doubles the Value of the Property'. At another date Lord Headley told his nephew, Frederic, that he was looking out 'for three labourers for your father to take over [from Ireland] to the Forest, who were accustomed to burn lime in running kilns. We have 120 Lime Kilns of the description your father wishes to introduce, namely to be used with Turf.' But the discovery was illusory. 'I am very sorry to tell you', wrote John Knight to his wife some little time later, 'that everything goes on but badly here—and the Lime seems altogether a perfect delusion. I now believe I shall never have occasion to build a kiln.' In the meantime, supplies were being obtained, at considerable expense, about 20*s*. per ton, from Combe Martin, and from a kiln belonging to John Williams, at Newlands, between Simonsbath and Exford. Some twelve years later (1841) another discovery appeared to have been made, and Frederic Knight writes that he has great confidence of being able to burn lime in the Warren. 'The rock breaks at the top with 94 per cent. of lime and is precisely like the heads of the best lime rocks at Combe Martin. I have been several times at Combe Martin to make my bargains, and they are now putting lime on my fallows at Cornham 6*s*. per ton cheaper than Mr. Williams delivered. When the road is made over Challacombe Common, which I will do very soon, I shall get it cheaper.' But once more, expectation was not realized, though in 1848 a kiln was built and some lime was burned at Bale Water.

It may be of interest to note that the winter labour force employed at Cornham at this time comprised two carters, each at 1*s*. 9*d*. per day; two ox-men, each at

1*s.* 6*d.* per day; their two drivers, at 1*s.* per day each; and one labourer, who was paid 1*s.* 4*d.* per day. There were fifteen oxen available for the bullock-teams. No particulars of the staff at Honeymead have been found.

All the time that reclamation by tillage was proceeding, John Knight was hard at work enclosing large areas within his boundary for grazing purposes. Mention of the Deer Park between Blue Gate and Prayway Head has already been made, but other large enclosures were stocked with sheep and cattle. Most of these were bought by John Knight himself, and he was at great pains to secure the best stock of its class, even though it may have proved ill-adapted to his purpose.

On the journeys undertaken by him to buy stock he was keenly observant of the conditions of agriculture and of the people in the districts through which he passed; one of them may be described, as being typical of many. On an evening early in October, 1826, he left Bristol by the mail coach and drove for two nights and a day, stopping only once to drink tea and eat bread and butter, and reaching Carlisle on the morning of the second day. He remarked upon some recent heath-land reclamation, by the Duke of Portland, between Appleby and Carlisle, and everywhere he was astonished at the extent of road-making in progress. The people, he records, were for the most part in employment and comfortable. After a night in 'a little dirty room' at Carlisle, he proceeded north a further 120 miles to Falkirk Fair, where he bought 'about 400 most beautiful West Highland Bullocks' and 'missed 80 others by not knowing the ways of the market'. He notes the arrangements of the Fair—'a considerable plain covered with immense herds of cattle standing separately, and tended mostly by persons in a variety of Highland dresses and all kinds of music, but the Bagpipe left the other but little chance of being heard. A long row of very large seats, full of whisky, divided in the middle of the plain the Highlanders from the Angus or Lowland cattle.

Leaving Falkirk he proceeded to Edinburgh, from which city he wrote to his wife for news of the Dongola Arab mares which he had just imported; remarked that 'many of the Scotch women still go without stockings', and regretted that he would not have time to see the steam-coach. Hearing of a water-meadow, near the city, which was let at £62 per acre and gave at least six cuts of grass every year, he went to see it. From Edinburgh he journeyed home, via Hereford, 'making a capital purchase of 95 Herefords. They appear cheaper than any cattle I have ever had'. So much impressed was he with this bargain, that he returned to Hereford a fortnight later 'and marched out with 200 of them at low prices'.

In the space of a month, he had travelled, by coach, about 1,000 miles, and had bought, in the course of his journey, some 700 head of cattle. All of them were sent down to Exmoor, but they did not exhaust the resources of the Forest, and John Knight determined to husband his capital and increase his returns by taking in more horned stock at agist. All the family were following his work with interest. 'I was so glad to hear', wrote Lord Headley from Paris, to his sister, Mrs. Knight, 'about the plans for the Forest. I mean that of taking in young Stock, which I should think would answer well, as the place seems adapted for it and it supersedes the necessity for so large a capital being invested in a perishable commodity. I shall not regret the scarcity of Veal, knowing that it arises from so auspicious a cause.'

The Scotch cattle acclimatized very well on Exmoor, and the large herd must have presented a fine picture on its hills. They fed well, and in the local markets they seem to have roused but little of that prejudice against strange stock which is still to be encountered in some places. Writing to his sister at Rome, on Christmas Day 1838, Charles Knight relates that 80 steers had been sold at the rate of 11*s*. per score, when other fat beasts in the market were making no more than 10*s*. per score; and that two of the old cows sold

out by his father in the previous year had been fattened, and sent to Tavistock Fair, where 'they carried off the Ribbons. This from the Devonians in the midst of their own country, who think no cattle can be good without a fine skin and small bones, is a great deal.'

But although they did so well in their new quarters, the Highland cattle were not a success. They could not live on the Forest in winter without artificial food. For some reason, too, they proved very intractable, and their reputation for wildness still lingers. 'All were wild and some were wicked.' Frederic Knight has described an extraordinary experience with a small lot which were ready for the butcher in the spring of 1841. 'Bennett [the farm manager at Cornham] fatted 20 of our Scotts, but could not tame them, for when they tried to drive them to market, they started in different directions across the country, tossed and gored everybody they met, and were shot in fields all over the country. I have got a short summary letter from him, detailing these events and giving a list of the wounded.'

In course of time the Highlands and the Herefords gave place, and the Devon Rubies and Shorthorns came into their own again. It must be remembered that Exmoor had been summer-grazed almost exclusively in the past by sheep, and in attempting to increase its capacity as an all-the-year-round cattle country, John Knight had little local experience to guide him. This business assumed considerable importance before it gave place in later years, the sales of cattle in 1840, for example, exceeding £7,000 in value.

Sheep had always been the characteristic and almost the only feature of Exmoor farming, and to them John Knight early turned his attention. Agistment during the summer grazing season fell off as the inclosure of the Forest proceeded and as the substitution of bullocks increased, but he himself kept large numbers, both for grazing and to consume the root crops on his newly-broken farm lands. He began with the local Exmoors,

but had much difficulty in securing them of the quality at which he aimed. 'Alas for my sheep', he writes, in 1836, to Mrs. Knight, 'which are still very shabby, and my wool I cannot sell at my price which is merely the market price—but as wool is improving in price every day and the manufacturers have "no Gauds in House", I have still hopes.'

For a few years he continued in the effort to improve his Exmoors, and in 1838 he notes the passing of an Act for the inclosure of Bratton Down, which would compel the farmers to sell their sheep, and he looked forward to obtaining a flock of the best quality. This, presumably, was a case similar to that of Exmoor itself, where the allotment of a parcel of land upon inclosure was no real equivalent for the right to range the Common at large, and flocks had to be dispersed. At the same time he was experimenting with other breeds. Those who know Exmoor to-day are aware that the Cheviots have long been established there, but it is not generally known that their first introduction dates back more than ninety years. There is no record of how they were obtained, but it is likely that John Knight bought them himself on one of his journeys to Scotland. He seems to have had no more success with them than with the Exmoors, in the early days. Great difficulties were experienced in getting good shepherds in this remote district, and John Knight's predilection for the employment of single men can have done little to promote the closer settlement of the country. Moreover, the district being extra-parochial and on the county boundary, it had always borne a reputation for lawlessness. 'On account of being stolen, killed by dogs and disease and lost by bad shepherds', he writes of his Cheviots, 'I could produce an account sufficient, I should think, to frighten the young Gents who are going to Australia with a certainty, as they suppose, of making great fortunes, if they had but once established a small flock.'

So serious were the thefts of sheep and deer, the

shepherds themselves being particularly bad offenders as regards the latter,[1] that he formed a guard of Irishmen for the protection of his property, under the guise of gamekeepers, to whom he promised large rewards for the detection of the thieves—'but I find these Potato-eaters must all come from the same part of Ireland or they will do nothing but fight.' Even the farmers of the district were stated to have 'taken every possible means of obtaining my breed of sheep', and their character for enterprise is borne out, further, by a note that 'Lord Ebrington has just found out that 1,800 sheep have been pastured on Lord Fortescue's land at his expense, by his Steward B—— and Farmer C——, his favourite, for many years. B—— fled; C—— remains to enjoy his newly-exposed character, and the sheep are to be sold for want of pasture.'

Disappointed with the Cheviots, in 1840 John Knight tried the rather remarkable experiment of a flock of Merinos, exchanging some Scotch bullocks for 100 ewes of this breed. A married shepherd was imported from Wiltshire, 'and a clever boy. They are likely to be of great use if I can prevail with the shepherd to put up with the solitude, of which I almost despair. I am doing my best to fit up the White Rock Cottage for this family, but society I cannot provide; indeed, several servants have lately left my station for want of company. The shepherd has three children and Wilts overstocked with such families. Bennett says we shall be able to get others if this one settles comfortably. He is quite different from the wild race I employ here. I hope the Merinos will answer better than the Cheviots.'

Exmoor, even at this date, may well have been a solitude. It is said that John Knight did little in the way of cottage-building, believing that married men were out of place on the Forest. Single men were em-

[1] 'The Shepherds have hitherto stolen most of the Fawns; Howchin [the factotum at Simonsbath] detected two of them walking off with a fine Red Deer Calf', *Letter from John Knight to his Wife*, 28th July 1841.

ployed, accommodated on the Scotch bothy system, and sleeping in hammocks. Besides the White Rock Cottage mentioned above, the only dwellings built by him were the double cottage at Limecombe, the range at Simonsbath of which the Post Office forms a part, and that at right angles to it.

Exmoor is not a pig-breeding district. To-day there are, probably, not half-a-dozen sows kept for breeding, and the few pigs that are fed are for home consumption. It is unlikely that there were any at all in the pre-inclosure days. Whether John Knight made an attempt to establish them has not appeared, but he certainly tried an experiment with Westphalians. His brother-in-law, Lord Headley, had imported some into Ireland, but having decided not to keep them he forwarded them, in August 1835, to Exmoor. As illustrative of the transport difficulty in those days, these pigs were sent by road from Aghadoe, Co. Kerry, to Cork, shipped thence to Bristol, thence by another steamer to Ilfracombe, to the care of the Bank there, whence they had to be conveyed by cart to their destination. 'They are a hardy sort', wrote Lord Headley, 'admirable for bacon, and I think would do well wild in the Brendon Woods. The young you will easily ascertain are thoroughbred by the curious stripes.' What became of these pigs is not recorded; there have been none in the Brendon Woods in living memory.

The inquiry as to the Dongola mares in the letter quoted from John Knight to his wife (p. 41) has reference to another early enterprise. Exmoor, of course, had for long been the home of a native race of ponies, and it is said that there were some 400 of them at the time of the inclosure of the Forest, the largest herd being that of the Warden, Sir Thomas Acland. Most of these were removed to the neighbourhood of Winsford Hill, but Sir Thomas left a small stock for John Knight. As with all else that he found, his desire was to improve them, and hearing a good account of the big Arab horses of the Dongola district, he joined

with a few of his friends in the expense of importing some. In colour they were black, with very fine skins, Roman-nosed, short-backed, and very good quarters. On the other hand, they are described also as being rather flat-ribbed, with drooping croups and rather high on the leg. The portrait of one of the stallions, *Mahmoud*, painted by James Ward, R.A., in 1828, when the horse was getting old, brings out both the qualities and the defects.

Two of the Dongola stallions and three mares arrived at Simonsbath, where John Knight had set up a considerable stud, consisting of some thoroughbred sires, seven or eight thoroughbred mares and some thirty well-bred mares of the Cleveland coaching type. To these, at this time, the Exmoor ponies formed only a secondary consideration, but a dozen twelve-hand pony mares were included. From this large and varied assortment, numbers of hunters, hacks, and harness horses of every type were bred and sold, and it is recorded that at one time twenty-eight horses from the Simonsbath stud were going as the best hunters with the neighbouring packs, besides those selected for the use of the owner and his family. The Dongola horse left some good stock, and Frederic Knight had some of the blood so late as the 'seventies. Two of his own breeding, *Tory* and *Commodore*, were successful steeplechasers.

As regards the ponies, the intention was to increase their size and quality by the use of thoroughbred sires. The Dongola horse was first tried, and he was followed by English thoroughbreds of the best blood—*Pandarus* by *Whalebone*; *Canopus*, by *Velocipede*; *Old Port*, by *Beeswing*. Though there was no difficulty in securing the desired improvement, none but the mares of the old stock could endure the winter fare and climate of the open Forest, and those of the first cross could only rear their foals if wintered on the inclosed and improved pastures. In the early days the ponies were not numerous, but the stock was gradually increased, particularly after the Highland cattle experiment had been abandoned.

THE DONGOLA ARAB, *Mahmoud*
From a portrait by James Ward, R.A.

HAMPSTEAD
PUBLIC LIBRARY

THE FOREST AS JOHN KNIGHT FOUND IT

THE FOREST AS JOHN KNIGHT MADE IT

All through the period of time under review, the surplus produce of the stud, including the ponies and all the draft animals, were disposed of privately. The public sales were not established until after John Knight's death.

To sum up this account of the first steps towards farming on Exmoor, three primary objects are manifest in the first twenty years or so of the work.

To begin with, as regards policy, it was clearly John Knight's intention to exploit the property at first-hand, and to organize a great agricultural enterprise under his own direction; there is no evidence at any time during this period that he contemplated the creation of a tenantry, holding farms under him, as the ultimate object in view. As the land came under cultivation, the necessary buildings for live and dead stock were erected, but there was no attempt, as yet, to carve out farms, to equip them with homesteads and so to settle the estate, step by step, in the most expeditious way.

In the second place, as regards reclamation for purposes of agriculture, he believed that large portions of the Forest, lying for the most part on the southern slopes, could be brought under the plough, and farmed under one of the established crop rotations of the recognized arable districts, for the production of corn and meat—regardless of the limitations imposed by the high elevation and heavy rainfall. Frederic Knight used to say that his father expected to farm on Exmoor, at an elevation of 1,200 feet, as he had been wont to do in the Midlands, a little above sea-level. The steps by which he proceeded to convert land in a state of nature into tillage were skilful and economically sound, but he failed to realize that this process should have been followed by the evolution of a crop-rotation adapted to the climate and soil, and he persisted in his attempt to establish something like the four-course system long after the impossibility of the task had been demonstrated.

In the third place, as regards the improvement of the

pastoral industry, John Knight sought to increase the value of those parts of the Forest which were unfitted for tillage, or which, at least, he was not then ready to till, by the introduction of live stock of other than the indigenous breeds, and, particularly, by increasing the cattle stock. As has been shown already, Exmoor before inclosure was utilized, in the main, for summer grazing by the local breeds of sheep. Some cattle were grazed, and the ponies were there summer and winter, but the sheep were the mainstay of the business. John Knight experimented with other varieties of sheep, and though he met with little success at this time, important results emerged at a later date, as will presently appear. As to cattle, he originated the business of summering stock from the lowland districts on the unreclaimed portions of the Forest, which grew, ultimately, to very considerable proportions.

For the rest, he seems to have had no idea, at this time, of colonizing the Forest, and herein lay one of his fundamental mistakes. A family of five was resident at the house at Simonsbath at the time of his acquisition of the property; otherwise the place was an uninhabited waste, nor had the locality surrounding it a very good reputation for law and order. By 1842 he had built two farms and about eight cottages, and he had only two tenants, the innkeepers at Simonsbath and Red Deer. The best chance for successful reclamation lay in the settlement of the estate, and its equipment with homes and the means for some sort of social life, as speedily as possible, and not a few of John Knight's difficulties and failures, so far as his farming was concerned, arose from neglect of this necessary accompaniment of his task in its earlier years.

IV

1842–1850. LANDLORD AND TENANT

JOHN KNIGHT was now an old man. He had carried on the heavy work of organization and management long after an age when most men would have been content to stand aside and leave the task to others. In 1836, being then seventy years of age, he had written from Simonsbath to his wife, who was visiting her brother in Ireland: 'I am full of my plans as usual—perhaps when you return you will find too many of them executed.' But eighteen months later he was complaining that his locomotive powers were so fallen off that he was no longer capable of the active management of the work in hand, which he had been compelled to delegate to his second son, Charles Knight, then about twenty-five years of age. At the same time, it is clear that for another few years he surrendered little beyond the personal superintendence of the farming and estate work, and that he still directed the policy.

In 1840 he had suffered a severe disappointment through the alienation of the great fortune of the elder branch of his family, the Knights of Downton, to a female line. He had been brought up to believe that it was settled to follow the male line, in which case he would succeed, and to a lay mind the settlement would seem to bear that interpretation, but the Courts decided against his claim. Whether it were the loss of this expected accession of financial strength, whether it were merely the result of advancing years, or whether it were due to both these causes, John Knight decided in 1841 to give up the management of the Forest, and he handed over the sole control to his eldest son, Frederic. The following year, being then seventy-six years of age, he retired to Rome, where he died in 1850, but up to the end he was kept closely in touch with the progress of Exmoor reclamation, and his interest in it never flagged.

The period now to be considered is marked by a

definite change of policy. For a short time Frederic Knight had to carry on as before; he travelled to Scotland to buy sheep, and the four-course farming continued. But the idea of letting off the land to tenants was already in his mind, and in the letter to his mother in which he tells her of his assumption of the management, he mentions also inquiries he had been making in this direction, from which he concluded that he would 'be able to get tenants from Wiltshire, who will cultivate farms and give good rents'. His determination to let arose from his conviction that he could never make the farming pay. 'I am going to try to let Honeymead and Cornham, with allotments of the Forest, for what I can get for them. If no one will have them I do not see what I can do.'

Honeymead was let at Lady-Day, 1842, to Henry Matthews. It seems to have included, as well, most of the land now occupied as Cloven Rocks, Picked Stones, and Winstitchin farms, with their buildings and six cottages, as well as Honeymead Allotment. The total extent was 2,100 acres, the rent £740 per annum, and the term of the lease twelve years. A house had been built at Simonsbath Barton, and this farm of 1,030 acres with buildings and two cottages, was let, a year later, to Edward Godwin, at a rent of £439 5*s*. 6*d*. per annum, likewise on a lease of twelve years.

The next farm to be let was Emmett's Grange, the boundaries of which were set to contain 1,300 acres. The tenant was Richard Hibberd, who had been farming previously at Tisbury in Wiltshire, and in September 1844 he took a twelve years' lease at a rental not recorded. The house had not been built at this date, but the buildings were in course of erection, and Frederic Knight on behalf of his father covenanted to complete the buildings, to erect a dwelling-house, two cottages for labourers, a granary, and a milk house and cowsheds sufficient for 35 cows. He covenanted also to erect fences to divide the land into eight enclosures, and all this work was to be carried out during the twelve months following. In

the subsequent year some minor buildings were to be erected, together with a further sub-division of the land, dividing it into fourteen fields in all.

Hibberd sent cattle and horses to the farm, which had to be wintered in the straw-yards of other farmers, and by March 1845 he had given up his farm at Tisbury and arrived on Exmoor. As he remained only a short time it will be convenient to complete the story of his experience before recording the progress of the leasing of other farms in due sequence. The house was not completed when he arrived, nor were all the buildings ready for occupation, and for three months Frederic Knight gave him the use of Simonsbath House. He was a dairy farmer, and dairying on Exmoor was his object, but before his first summer was out he was so much alarmed at the prospect that he made overtures to Frederic Knight for a surrender of his lease. The terms he proposed were unacceptable. A distress for rent was levied, the amount taken being £120, and finally an ejectment was ordered and Frederic Knight resumed possession. The final scene was enacted at Bridgwater Assizes, in 1847, when cross-actions were brought—on Hibberd's part, for breach of covenants as to the erection of buildings, and, on the landlord's part, for bad cultivation.

To continue the story of the early lettings, Cornham was let in 1844—the house, homestead, three cottages, and 545 acres—to William Hannam, again on a twelve years' lease, at a rent of £244 13*s.* 0*d.*, this figure to be increased by one-third at the middle of the term.

On paper, at all events, Frederic Knight had already secured an annual gross income, under the new policy, of some £1,400, and he was well satisfied with this result. Reporting progress to his sister Margaret, at Rome, in the autumn of 1844, he wrote: 'The letting of the farms has, however, gone on better this year than I had reason to expect. I have no doubt that my Father still thinks the price very low, but it is impossible to get people of capital to change their country without offering them what they consider to be a certain ad-

vantage: and people without capital would do me no good. I believe I could not have a better lot of tenants if I may judge from all I hear. No one who has come to look at the Forest from any other part of England would hear of taking a forest farm under twenty-one years. Mine are all twelve years.'

The process of enclosing large fields of fifty acres or so had been going on steadily all the time. Fences were made, consisting of stone and earth, turfed over and surmounted with a beech hedge protected on either side by 'wreath'—a strip of wattle fencing necessary to make the walls sheep-proof—and there were now large tracts in all the valleys equipped as to boundary walls in this way, some of the land being already under cultivation. Frederic Knight's success in letting the four farms led him to go forward vigorously with his scheme for developing the tenant-farming system, by the division of this land into further large farms which he was prepared to equip with houses and buildings as required by the tenants. The idea was to follow the system which had been so successful in other parts of the country—for example, in the Lincolnshire Wolds and on Lincoln Heath—of letting the farms on long leases at very low rents in a state practically unimproved except for the buildings, a certain amount of fencing, and here and there some breaking of the land, with a liberal scale of tenant-right allowances for improvements subsequently to be effected by the tenants, combined with a progressive rent to stimulate their execution.

Customs for the compensation of tenants for improvements effected by them on their holdings and unexhausted at the time of quitting, originated in the eastern counties. This was natural, these being the areas most predominantly arable, where developments in farming practice calling for the expenditure of the tenant's capital on improvements of a more or less long-term character were occurring more rapidly than in the parts of England predominantly grass. The 'Lincolnshire Custom' for compensation on quitting was the best

known; it spread through many other districts and it formed the basis of the first statute regulating the relations of landlords and their farming tenants, the Agricultural Holdings Act, 1875. The idea of arable farming, on an extensive scale, on Exmoor, still prevailed; but this apart, farming there of any kind, at this date, called for the outlay of much capital on fencing, subsoiling, liming and so forth, and the tenant had to be secured in his expenditure if he were to be called upon to make the improvements.

To get a picture of the estate at this time, all the farms, with the exception of Honeymead, Simonsbath Barton, Emmett's, and Cornham, were in a condition approximating to that of Titchcombe to-day. They had been laid out, and certain enclosures made within the boundary fences, and so they remained—ready for equipment with house, homestead, and cottages, and for cultivation and improvement, so soon as the policy of landlord occupation gave place to that of tenant farming.

Frederic Knight now had as his agent, or steward, J. Mogridge, of Molland, a member of a well-known Devon farming family. With his assistance he set to work to equip the farms which he had partially enclosed and made, and by the year 1848 houses, cottages, and buildings had been erected on Driver, 400 acres, Duredon, 900 acres, Warren, 700 acres, Horsen, 400 acres, and Wintershead, 200 acres. Pinkery, 400 acres, Titchcombe, 557 acres, and Cornham Hill, 600 acres, were also designated farms at this time, but they had not yet received their building equipment, and the extent of each of the holdings, as given at this date, was evidently quite tentative, remaining to be determined by tenants' requirements. There is no mention, so far, of Larkbarrow, nor of Tom's Hill.

He is said to have been his own architect, and certain sketches and notes for houses and cottages support the statement. All the work was done direct, by local labour, and local stone was used, but the prejudice against home-grown timber seems to have been as strong then as

now, and a note at the foot of one of the specifications runs—'No English fir for me'. Slates were brought across from Wales to Lynmouth Harbour. The houses vary but little in design, and they are planned quite reasonably well, but by their unrelieved severity they serve to contribute to the grimness of Exmoor at some seasons, rather than to mitigate it by their suggestion of human occupation. But this appearance could be changed at any time by an application of colour-wash in any one of the shades which give the appearance of warmth and comfort to the farmhouses and cottages of the surrounding district.

Part of Driver was let, in 1847, to John Hedditch, for £160. Hedditch came from Dorset, and dairying for cheese was the system of farming he introduced. In the following year a notable change in the management of the estate took place, by the appointment of a new agent to succeed Mogridge. This change followed, almost necessarily, upon the change in the policy. All the farm tenants found up to this date had come from afar, and it was recognized that if the rest of the new farms were to be let, their tenants would have also to be imported. North Devon and West Somerset then, as now, were districts of small farms, occupied by men whose labour formed a large part of their capital; moreover, the local belief was strong that Exmoor was of no use except for summer grazing. So Frederic Knight resolved upon the appointment of a man, as agent, who should come from a country where improved farming on a large scale was understood, and he found him in Robert Smith.

Smith was a member of a well-known South-Lincolnshire farming family, settled in the parish of Crowland, and, in due course, he had taken the Home Farm on the Burley Estate, near Oakham. Here he soon made a name for himself as an agriculturist, and he became noted as a breeder of Shorthorn cattle and Leicester sheep. He was one of the founders of the Rutland Agricultural Society, and was elected a member

of the Council of the Royal Agricultural Society at a time when vacancies were filled, not by the votes of the general body of the members, but by the Council itself, and the honour was very carefully bestowed. After migrating to Exmoor he became a member also of the Council of the Bath and West of England Society, and for many years he contributed articles to the *Journals* of both Societies. These afford ample evidence of outstanding ability; he had a scientific mind, a philosophic outlook, and a wide range of knowledge on matters pertaining to his craft. He was, in particular, an authority on irrigation, and Philip Pusey went to see his Exmoor water-meadows. Above all, he was a farmer. 'His writings are the results of his experience, instead of his farming being the result of other people's writings. At Burley he carried the Leicester sheep to perfection, and at his sale, previous to removing to Exmoor, he realized twelve hundred guineas for sixty rams. He is, in fact, a farmer of the modern school, who, used to agriculture from his earliest years among the Lincolnshire men, has found it worth while to study earnestly the science and theory of his profession.'

Robert Smith was appointed agent at Lady Day 1848. His salary was £400 per annum, and he lived at Emmett's Grange, where he occupied the farm of about 670 acres, as an ordinary tenant of the estate. What induced him to forsake his fertile farm in the Midlands for the strenuous task of land reclamation, at a small salary, in this distant country, is not apparent, but there is a story that he had been practically ruined by protracted litigation with another exhibitor who had committed some illegality in the showing of a beast at the Rutland Show, and he may have been under the necessity of seeking some salaried appointment. Or it may be that his active and resourceful mind was attracted by the opportunities for experiment and creative work presented by the Forest in its condition at this time. 'Robert Smith's coming here', wrote Charles Knight to his father, 'has occasioned a great talking in his

country, and Exmoor is very much talked up in those parts . . . he goes on very well and understands perfectly how to manage the farmers, and has no wish to spend money unnecessarily.' He remained agent until 1866, when he retired, with his wife, to Ilfracombe, and both of them died there.

Robert Smith went to Emmett's Grange when the house had just been built, and when the farm, except for the boundary fence and a few inclosures inside it, was still as Hibberd had left it. The policy of the estate, as regards the equipment of new farms, was to build the house when the tenant was forthcoming, and to let him into possession to begin the reclamation of the land while the erection of the farm buildings proceeded. As regards the land, Robert Smith himself has described the principles upon which he went to work. 'In the laying out of a hill farm', he says, 'which shall be chiefly dependent upon its own resources, it is found best to divide the lands into three distinct classes. First, the hill-top and other rough land should be set out, if possible in one block, as summering ground for young cattle, store sheep, colts, ponies, &c., to be subsequently improved by surface drainage, similar to the Scotch plan of "Sheep-drains"—an inexpensive process, yet found of infinite value. [But not on Exmoor.]

'The second, or middle class of land to be set out is the portion lying immediately below the rough, wet ground, or situated upon a southern aspect; these lands are intended for arable culture.

'The third class consists of the flats and marshes in the valleys, together with some portions of the adjacent hill-sides, which should be laid out for pasture and water-meadows.'

As regards buildings, in the case of new farms a bargain seems to have been made with the prospective tenants that the landlord should spend a sum equal to £2 per acre on house and homestead, and figures have been provided by Robert Smith of the details of the expenditure on thus equipping one of the Exmoor

farms—not named, but possibly Tom's Hill—in the year 1850. The farm extended to 300 acres, without the allotment of rough grazing.

Cost of erection in 1850

	£	s.	d.
Total cost of building farm-house	177	9	2
" " " " calves' houses and piggeries	46	13	4
" " " " barn, stable, and cart-shed	160	15	3
" " " " open cattle-sheds and turnip house	50	8	4
" " " " cowsheds, stable, corn, gig, and coal houses	58	15	0
" " " " stone walls, gates, &c.	18	13	4
	512	14	5

By 1848 the prospect of letting much of the land had made the question of fencing a serious one as regards expense, and it was decided to make the tenants responsible, they being given material, which they had to cart themselves, and being allowed to deduct 6*s*. per chain from their rents in respect of all fences built. 'Wreath' was to be abolished as a coping, and wire substituted—a single wire for interior fences and two wires for the boundary fences. 'There are 4 farms with buildings upon them (Duredon, Warren, Wintershead, and Horsen), but they are not yet let. The thickest wire used for fences costs £4 per mile, and if the farms are let 15 miles will be wanted this winter. It will take the first year's rent to let in the new tenants, but they will have to pay their rent almost in time for the outlay.' The fences are earth banks, faced with stone on each side to a height of four feet and finished with two feet of grass sods, making the fence, when complete, full six feet high. It was then planted with a double row of beech plants upon the crown, protected on either side, at first by 'wreath', and later, as mentioned above, by strands of wire. The full cost of such a fence was about 30*s*. per chain at this time, and the labour, including carriage of materials, accounted for about one-third of the total. For some of the interior fences earth banks covered with turf or sown with grass seeds and sur-

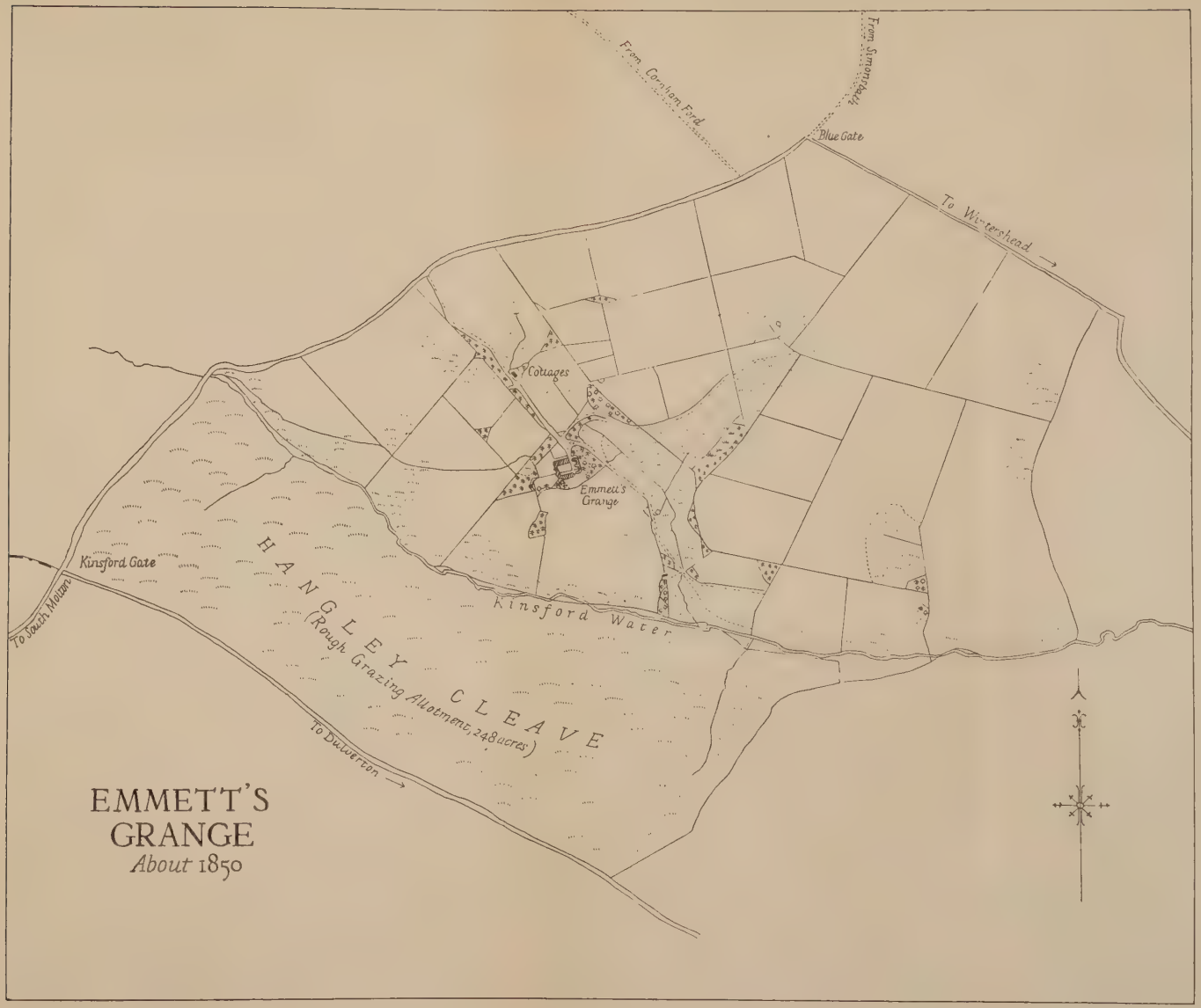
mounted with beech were used, so saving the cost of stone facing. The beech alone represented a considerable expense. Many of the plants were bought, but probably most of them were grown at Simonsbath, where there was a considerable nursery and a full-time nurseryman. In one year alone (1850) no less than £16 was paid for beech nuts.

As to the cultivation of those fields which were to be broken up after fencing, the cost depended upon the need, or otherwise, for subsoiling. Robert Smith has recorded the operations necessary, and their cost, in either case. 'The system adopted upon my own farm is, first to pare the land by manual or horse labour, according to circumstances; then to burn the furrow as it lies upon the surface; the ashes are then ploughed in as thinly as possible, and from $2\frac{1}{2}$ to 3 tons of lime per acre spread upon the surface to decompose the vegetable matter; after which the whole is mixed by the harrow, &c., the cost per acre being as under:

	£	s.	d.
Paring, if by manual labour . .		12	0
Burning upon the land . .		1	6
Ploughing, harrowing, &c. . .		8	6
Lime and labour	2	10	0
	3	12	0

Should the furrows have to be thrown in heaps for burning, and the ashes spread, the cost will be 3*s*. 6*d*. per acre more.

'On the peaty soils requiring to be subsoiled, I find it best to prepare the land in the autumn for the succeeding spring, by paring and burning upon the land, half-plough the land into ridges, and sub-soil between them, the subsoil plough following the teams every other furrow. By this plan the ashes are preserved for early use and the land left perfectly dry and exposed to the winter frosts. This is succeeded by a cross ploughing in the spring, and the whole is complete for harrowings, sowings, &c., at an early period. The cost will stand thus:



EMMETT'S GRANGE

About 1850

	£	s.	d.
Paring and burning		13	6
Half-ploughing into narrow ridges (2 horses)		4	0
Subsoiling every other furrow (4 horses, man and boy, 2 acres per day)		8	0
Cross-ploughing		6	0
Harrowing, &c.		3	6
Lime and labour	2	10	0
	4	5	0

This process may be followed by any crop, either corn or roots.'

The prices given are for horse-labour, but Robert Smith preferred to use bullock-teams of six oxen. Not only were they particularly adapted to the heavy tasks of ploughing this fibrous soil and then subsoiling it, but he found them a more economic proposition on the farm than horses. There was very little winter work for team-labour, and horses had to be kept in idleness; on the other hand, the yoke-oxen could be tied up, when the autumn work was over, and converted into beef.

It was obvious that much of the task of the making of the land was to fall upon the tenants under Frederic Knight's proposals. Robert Smith drew up for him a form of lease and a scale of allowances for improvements which should be attractive to tenants; in fact, Sir Thomas Acland said that he deserved 'the credit of being the first to introduce into the far West the Lincolnshire principle of compensation to tenants for durable improvements made at their own expense, from which they have not had time to reap a profitable return'. The leases were to be for twenty years, divided into periods of four years, with rents beginning at very low figures, and rising at the end of each period of four years, the lessee having the power of determining his lease at the end of eight or sixteen years, on giving twelve months' notice. Thus, in the case of Wintershead, let, as will appear, to Gerard Spooner, at 5*s*. per acre for 20 years, 300 acres were to be improved and the rent of this portion was to rise to 7*s*. after four years, to 9*s*. after eight years, and to 11*s*. after twelve years

and for the rest of the lease. These principles, upon which the landlord-and-tenant farming system was to be developed, and the nature of the tenant-right to be created, have been recorded by Robert Smith himself, and they cannot be described better than in his own words.

'The letting of moorland upon equitable terms embraces an extensive range of topics for consideration.

'First, we have the "lord of the soil" to consult, and next to find a suitable tenant for the work to be done. These parties either do or should meet upon equitable terms, in the character of two men meeting to make a bargain, the result being, "If you will do this, I will do that."

'The first business will be to arrange the general principles of the bargain. The landlord will probably agree to erect suitable buildings, fences, to make roads, &c., and to perform all drainage, the tenant paying a proper percentage for this latter outlay. The tenant will then have to reclaim all lands and wastes (worthy of cultivation) under suitable covenants.

'The carriage of materials is usually thrown upon the tenant, or in other words it forms a part of *his* agreement towards the matter. This is a stipulation which I have long thought, at least upon this class of farms, objectionable, and it would be well at any rate to postpone bringing it into operation, for the tenant will have enough to do with his teams, during the first few years of his tenancy, in reclaiming these rough and rugged lands.

'In after years this subject may be more fairly pressed, and thus made agreeable to both parties, by the tenant doing the carriage for future permanent improvements, and so encouraging the landlord to keep pace in his outlay with the progress of land cultivation.

'With such an understanding clearly defined, every possible and prudent encouragement should be given to the tenant. First, by a long lease with breaks in it, to allow the tenant to quit at the end of a certain number

of years, should he wish it. Second, by a proper tenant-right for exhausted improvements at the end of either term, to prevent the farm being run out towards the end of the term. Third, by the adoption of the plan of a "scale of rents", commencing at the lowest possible figure in the outset, and increasing every four years to the end of the term, as the farm improves in value.

'To illustrate this last point we may suppose a case, viz.—that a farm is let for 20 years; that the tenant may quit at the end of 8 or 16 years, and that the average value of the farm for the whole term is 10*s.* per acre; the scale of rents in this case would run thus:

			s.	*d.*	
1st	4 years,	average	6	0	per acre.
2nd	,,	,,	8	0	,,
3rd	,,	,,	10	0	,,
4th	,,	,,	12	0	,,
5th	,,	,,	14	0	,,

'Thus, should the tenant quit at the end of the first terms of his lease, he will only have paid the lowest rents during the period of making his major outlay.

'In illustration of the second point—compensation for durable improvements—I subjoin a copy of a Memorandum which I have found highly satisfactory to the tenants on the property of which I have the care as resident agent.

Memorandum

In order to encourage the tenant to cultivate the farm in the highest possible manner, the said hereby engages on behalf of himself and his representatives, owners of the farm let to the said , ON CONDITION of the foregoing covenants having been fulfilled and kept by the said , his executors or administrators, that when the said , his executors or administrators, shall quit the said farm, either at the expiration of the lease for years under which he holds it, or at the expiration of years, as by the said lease provided, and not otherwise, the said or the incoming tenant will allow to the said or his executors, administrators or assigns, for such improvements made on the said farm, subsequent to the date of this memorandum, and within the stated period before quitting, as are contained in the

following list, and are marked and enumerated with the figures ; that is to say, so much of the amount of such expense as shall be in the given proportion, in each case, to such a number of years as the said , his executors, administrators and assigns, shall fall short in the occupancy of the said farm, after incurring such expense; IT BEING EXPRESSLY STIPULATED THAT THE TENANT IS TO GIVE AN ACCOUNT EACH YEAR of such outlay as he proposes to make in DURABLE improvements, in order to obtain the owner's sanction in writing to the proposed expense, SUCH SANCTION BEING NECESSARY IN ORDER TO CLAIM OR BE ENTITLED TO ANY ALLOWANCE from him; and shall also render an account of such disbursements within each year,—such account to be examined and signed by the landlord, or his accredited agent, and to serve as a voucher for the sums so to be recovered by the said tenant; and that non-payment of rent (if the same shall have been demanded, and afterwards remain unpaid for the space of six months) or non-fulfilment of covenants shall FORFEIT any claim or right to such allowance for improvements.

The proportion of the proposed conditional allowances to be regulated as follows:

1st. If the tenant drains the land at his own expense, with the consent and subject to the inspection of the landlord or his agent, an allowance to be made for the materials and workmanship, for (*eight to fourteen years as the case may be*)
years, so that the allowance shall yearly diminish in equal proportions, and be cancelled by years' enjoyment of the improvement.

2nd. For lime used on the land, with like sanction; the allowance to extend in like manner for FOUR years.

3rd. For bones used on the land, with like sanction; the allowance to extend in like manner for THREE years.

For other manures, as the case may be.

4th. For subsoiling peat-lands, with like sanction; the allowance to extend in like manner for FOUR years.

5th. For making and planting new fences, with like sanction, the same being left in a good and growing state; the allowance to extend in like manner for FOURTEEN years.

6th. For making water-meadows, with like sanction, the same being left in a good and tenantable state; the allowance to extend in like manner for (*four to eight years as the case may be*)
years.

7th. For buildings erected on the land, with like sanction, the same being left in a thorough repair; the allowance to extend in like manner for TWENTY years.

And the said and
hereby mutually agree that if any dispute shall arise between the said , their executors and administrators,

upon the said quitting the said farm, or upon the state of cultivation or condition thereof, such dispute shall be settled by two referees, one named by each party, or their umpire; and in case one party refuse to nominate a referee within ten days after notice has been given in writing by the other party, the referee of the other party alone may make a final decision.

If two referees are appointed, they are to nominate an umpire before proceeding to business, and the decision of such referees or umpire, as the case may be, shall be final.

WITNESS the hands of the parties.

'The landlord should reserve, at least on strata deficient in lime (as one of his conditions), that no land shall be broken up from its original or natural state without being properly and sufficiently limed, that is, with at least 2½ to 3 tons of lime per acre, upon which the landlord will stipulate to pay his proportion, according to the annexed memorandum.

'In the event of the tenant commencing upon a small yet eligible site for additions, as had been previously named under the head of "Buildings", it should be agreed that only a certain amount of money should be spent in buildings each year, that is, just so fast as they are required for use, instead of erecting a *mass* of buildings in the outset, many of which must remain unoccupied until the farm shall have so far advanced as to require them.

'The enclosure fences to be erected by the landlord should all be properly specified in the agreement and upon the plan of the farm, leaving all subsequent divisional fences to be agreed upon as the work proceeds; as so much depends upon the turn things may take for and against the farm. In the carrying out of these subsequent agreements there need not be the least difficulty, provided that both parties meet on the footing of having a mutual interest in the progress of improvement as fast as their respective capitals can be laid out with a prospect of reasonable returns; and that the consideration of these two distinct interests is regulated by mutual confidence and goodwill. *In no instance* should a new fence be erected until the land is required for cultiva-

tion, as it would be absurd to enclose rough lands (or a whole farm) before they are actually wanted for improvement. The cost of fencing is a high charge upon "open lands"; but with an increasing population, and consequent increased consumption of food, we have a good guarantee before us that our increased produce will find a ready and remunerating market; so that the investment to be made by the landlord, coupled with that of the tenant, may fairly be classed amongst the safe calculations of the day, and a proper return of interest for his outlay may be expected. In saying this I must, however, add, that the outlay should be judiciously adapted to local circumstances, and that too much should not be expected at first, as the value of the "fee simple" of the estate will be steadily increasing (as shown by the scale of rents), if a tenant is well and efficiently encouraged, and may ultimately warrant even a more extended outlay in permanent improvements for the further development and beauty of an estate. There is no safer investment than well-directed capital in permanent improvements; and far better would it be to improve a property already in hand than to extend the acreage by purchase of additional lands.'[1]

With the farms delineated and conditions of tenure settled, Robert Smith proceeded to make them known, and the following advertisement appeared in *The Lincolnshire Chronicle* and in other papers circulating in the east-midlands:

Farms to Let upon Improved Principles

Mr. Robert Smith begs to inform the Public that he has two Farms to Let upon the Forest of Exmoor, the property of F. W. Knight Esq., M.P., one consisting of 740 acres, the other of 1000 acres.

Also several smaller Farms, the property of other noblemen [*sic*], varying in size from 100 to 600 acres.

Emmett's Grange, South Molton,
14 August 1849.

[1] It was not until more than a generation after this date that the *Agricultural Holdings Act*, 1883, secured to all tenant-farmers such equitable conditions of tenure as were provided, on Exmoor, by Frederic Knight, under the lease which Robert Smith had drafted for him.

And again a year later:

Farms to Let on Exmoor

Several more farms of various sizes are now ready for occupation, some of which are partly cultivated, have excellent model buildings upon them, and will be let upon liberal terms to enterprising tenants.

The tendency of these new soils to the growth of roots, etc., is remarkable, hence especially adapted to Sheep and Stock Farming. The property is extra-parochial.

Every particular as regards Rent, Lease, Tenant-right, character and capabilities of the soil, etc., may be had on application to Mr. Robert Smith, Emmett's Grange, South Molton, Devon.

16 August 1850.

As a result of the advertising campaign, three more farms were quickly let—Warren, to George Allen Harrold; Horsen, to Robert Searson, who was farming also at Market Deeping in Lincolnshire, and who ran the Exmoor farm through a bailiff; Larkbarrow, to James Meadows, who came from Leicestershire. These three were occupied by 1850.

In this year John Knight had died, and Frederic Knight had become owner as well as manager of the Forest. The equipment and leasing of land went on, and by Lady Day, 1852, the following farms had also been let—Wintershead, with an allotment on the South Forest which brought it up to some 2,000 acres, to Gerard Spooner, a Scotsman; Simonsbath House and about 580 acres, to Charles Le Blanc, of Epsom; Duredon, to John Bullas. So, by this time the policy decided upon ten years before, when only Cornham and Honeymead farms were made, had resulted in the formation of nine more holdings, which, together with these two, and some large, unequipped allotments, extended to some 8,500 acres and were producing a gross revenue of some £3,200.[1]

To Gerard Spooner, although he remained at Wintershead only for six years, belongs the credit of having introduced a system of farming on the Forest which was one day to be its most permanent and important

[1] During the years 1851–2, Robert Smith drew £69 11*s.* 6*d.* for 'entertaining gentlemen seeing farms'.

feature. His farm was 'occupied as a Scotch sheep farm, with flocks of Cheviots and black-faced sheep. It is well known that the Cheviots thrive best where the grass is green; the blackfaced will do where there is little but heather. This tenant, who has Scotch shepherds and Scotch collies, is endeavouring to introduce the Scotch system of selling off his lambs every year in the autumn. The total ignorance of the surrounding people of the existence of any sheep except their own native breeds is a great obstacle to this plan; but if he succeed, it will be a capital thing for the country.' Frederic Knight was, naturally, much interested. At this time he estimated that he had some 6,000 acres of open land unoccupied. 'If Mr. Spooner's plans answer'—he noted, on some calculations he was making, in 1852, as to the potential income from the Forest—'this will soon be let.' Once more his expectations were disappointed, but though a failure at this date, the plan was tried again some twenty years later with every success, and it continues in operation to this day. The shepherd brought down with the sheep was John Scott, and he became a stockman or herd to Frederic Knight when Spooner gave up.

To an experienced farmer, such as Robert Smith was, the impossibility of growing wheat and barley on Exmoor was quickly apparent, and he realized that the development of farming there depended on intensifying its long-established capacity to carry stock. Thus, root-growing and rotation grasses became the main objectives, though it is a tradition that the tenant at Larkbarrow grew wheat during his brief occupation of the farm. Oats were only grown to be chaffed as winter feed for horses and cattle. As to the utilization of the crops, sheep and cattle raising and feeding were practised, but several of these early tenants attempted dairy-farming for cheese-making, and their cheese-presses may still be seen in some of the farm-houses. A reference by Mr. Acland (as he then was) to the 'excellent Stilton cheese' of one of the tenants is quoted on the

EMMETT'S GRANGE

AN EXMOOR FENCE

AN EXMOOR KITCHEN

CHEESE PRESSES

next page, and Lewis Knight wrote, in January 1850, 'I have got a cheese, a Stilton, made on the Forest, which Frederic thinks will be rich and good.' These were the produce of Larkbarrow, at the only time when it was in tenant-occupation. 'All the farms on Exmoor are store-farms, with some dairies. The cattle most in favour, and deservedly, are the Devons, which can be fed to great advantage on the moor in summer, and on the reclaimed land in winter.'

There is no doubt that the Forest at this time must have presented a very attractive appearance to the eye of the land-improver. All down the valleys were signs of activity; inclosures were being fenced, buildings were going up, plantations were being made, bullock and horse teams were breaking the Forest soil. It was just now that the work was visited by Sir Thomas Acland (as he became later), and that which he saw impressed him very much. 'Good hedges are rising and the farmhouses are being surrounded with plantations, which will give them an air of comfort and respectability. Once furnished with "succour", the natural capabilities of the Forest may be turned to account. These are a soil and climate favourable for the growth of grass and of root crops; for the breeding and rearing of stock; natural springs and convenient slopes for water-meadows; ample streams for water-power, and lime close at hand.

'Since Mr. Smith's agency commenced he has let 4,000 acres to highly respectable tenants, in addition to land previously occupied. It is a real pleasure to witness the success of manly and enterprising farmers on new ground. Mr. Hannam [of Cornham], from the neighbourhood of Wincanton, has a herd of yearlings, crossed between Devon and Hereford, in as beautiful condition as any one would wish to see; and makes very good cheese, like Cheddar. Excellent Stilton cheese is made on the north side of the Moor [at Larkbarrow] by Mr. Meadows, from Leicestershire. But one of the most remarkable sights

on the moor in November last [1850] was a field of 60 acres of purple-topped turnips, which, after a tour through Lincolnshire and Norfolk, I thought were the finest I had seen within the year. They were on Horsen farm, rented by Mr. Searson, who is still in occupation of a large farm near Market Deeping, in Lincolnshire, and wishes to have two strings to his bow in these times; and if corn fail him, to fall back on roots and stock. 700 sheep, a cross between Exmoor and Southdown, were folded on these turnips, and made the hill look like Lincoln Heath. On the pastures outside was a breeding flock of Exmoor ewes with a Leicester ram, intended to drop their lambs as late as April. The turnips were grown on newly-broken ground dressed with lime.'[1]

Altogether the estate incurred an expenditure of £16,800 on buildings, roads, and fences during the period under consideration, apart from the money laid out by the tenants themselves for which the landlord had a contingent liability under the terms of their leases. The estate office work, under Robert Smith, was of the highest order. Nothing was undertaken without the preparation of estimates of cost, both of labour and materials, in the fullest detail, including an analysis of the latter to show 'materials in stock' and 'materials required'. The clerk, John Southwood, was paid £150 per annum and a house, but after his death, in 1852, there seems to have been no new appointment. Most of the building had been finished by that date.

It is possible now to make some computation of the cost and of the financial result of land reclamation, at this date, on Exmoor. John Knight had paid £5 an

[1] From (Sir) Thomas Dyke Acland's prize essay on 'The Farming of Somersetshire', published, in 1851, by the Royal Agricultural Society. 'Young Acland is going to publish an account of the farming of Somersetshire; he has been several times to Simonsbath and has, I believe, changed his opinions of the Forest. Previously his ideas were obtained from old Ralph, of Exford, and other people of the same description, but now I fancy Smith, the agent, has talked him over, and he thinks everything doing well.' *Letter from Lewis Knight to his sister, Margaret, at the Palazzo Bracci, Rome,* 17th January 1850. 'Old Ralph' was the Exford parson, the son of a Cumberland statesman, and 'as great with his woolly flock as with his parishioners'.

acre for the land, and taking the case of the 300-acre farm already given as an example of building costs, and allowing for an allotment of about 300 acres of unimproved grazing to accompany the improved land, the total cost of the farm would be as follows:

	£
Purchase of 600 acres at the average price paid for the King's Allotment, viz. £5 per acre	3,000
Erection of House and Buildings at £2 per acre	600
Subsoiling, liming and cultivating 300 acres at £4 5*s*.	1,500
Fencing—say 400 chains at £1 10*s*.	600
Making road, say	80
Total cost of Farm	5,780

To give a return of 5 per cent. on the cost, a rent of £290 would be required. Now the unimproved grazing on the Forest was estimated to be worth 4*s*. per acre, in fact it realized this, through agisted stock; so deducting £60 as representing the annual value of the 300 acres of allotment, then £230, or some 15*s*. per acre, would be needed as a fair return on the cost of the improved portion of the farm. Nor does this take account of the general estate expenditure apportionable amongst the various holdings—public roads, plantations and shelter-belts, boundary-fences, &c.—both their construction and maintenance.

On the whole, the rents secured under Frederic Knight's leases to his first tenants approximated sufficiently closely to a fair return on the capital legitimately accountable—that is to say, omitting amenity and luxury expenditure and the cost of some of the more fantastic experiments. Had the rents reserved proved themselves to be payable, the finance of Exmoor reclamation would have made a fair showing, but events were quickly to prove that in expecting returns from the land of this order, the capacity of the Forest had been over-estimated.

V

1851–66. CHEQUERED EXPERIENCES

JOHN KNIGHT'S death brought about but few changes in the administration of the Forest. As noted already, his house was let, together with a large block of farming land, and the hunter breeding stud was sold by auction, realizing £945 15*s.* 10*d.* Frederic Knight took up his residence at Lynton, and, for the rest, the policy of development and farming at second-hand was continued. The number of the farm holdings created was completed by the equipment of Tom's Hill and Pinkery; the pony stud was maintained at about 400, though the efforts at improvement by out-crosses were given up, and only pony sires were used; large numbers of cattle were taken in from the surrounding country for the summer grazing on the undeveloped lands, and a revenue of some £1,000 per annum was derived from this source alone.

Although the income from the Forest had now reached a considerable figure, the expenses of maintenance absorbed the whole of it, as the following summary shows; the period covered is from 16th January 1850—the date of John Knight's death—to 25th March 1851:

Receipts.	£	*s.*	*d.*	*Payments.*	£	*s.*	*d.*
Rents	1,812	17	7	Buildings and Repairs	1,791	6	1
Keep of Cattle and Ponies	962	5	2	Establishment	572	2	3
Bark	85	0	0	Taxes	420	5	10
Dairy Produce	24	14	10	Farms in hand	420	1	3
Grass and Hay	20	10	0	Fences	367	12	4
Corn (from Goat Hill)	11	8	6	Nursery	172	0	4
Sundries	24	15	2	Deer and Game	99	3	4
	2,941	11	3	Challacombe Lime Rock	11	5	0
Excess of Payments over Receipts	933	12	0	Simonsbath School	6	4	8
				Petty Cash	15	2	2
	3,875	3	3		3,875	3	3

This summary takes no account of an item of £745 6*s.* 0*d.* paid to Frederic Knight, of which no particulars are furnished, but which seems to have been

in respect of services and expenses in connexion with the executorship.

In April 1850, Charles Knight had written: 'There is about £1,400 to be laid out in buildings this summer in the Forest, after which the expenses entirely cease, with the exception of Smith's salary, the taxes, Harriet to take care of the House, a carter with two horses, and two labourers. So that the Forest will begin to pay from next October.' Events were shortly to prove, however, the truth of 'the old saying that land is capital without interest'—which he himself quoted in another letter before the year was out.

The Knight family were clearly disappointed with the financial position of the estate, which contributed to the difficulty of Frederic Knight and his co-executor in the payment of the legacies under John Knight's will, and a Chancery suit, which led to the appointment of a receiver, was the result. There is nothing to show that this step had any effect on the work on Exmoor, and arrangements were made, by 1862, by which the parties were satisfied and the receiver discharged.

Things were going badly with the tenants of the new farms. Already, by 1852, Driver and Barton farms had changed hands, and the new tenant of Driver remained only one year; the tenant of Larkbarrow, who made the Stilton cheese which Mr. Acland praised, had failed, and a distress had been taken for his arrears of rent (this farm has never been re-let); the tenant of Red Deer had left, and a half-year's rent was lost. In 1853, a new tenant had to be found for Driver; in 1855, for Barton again; in 1857, Horsen was given up; in 1858, Simonsbath House and farm, Wintershead, and once more Driver changed hands; in 1860, Wintershead was again vacated, and the tenant found for the farm failed two years later; Duredon changed hands in 1861; and to complete the story of the ten years, in 1862, Simonsbath House and farm were vacated once more; Honeymead was given up by Henry Matthews, who had farmed it since 1842, and it was split up into three holdings by

cutting off Picked Stones, with 385 acres, and Winstitchin, with 407 acres. Lastly, the tenant of Wintershead went bankrupt. The only successful achievement was the letting, for the first time, of Tom's Hill, with 207 acres, 'only 115 fenced', for twenty years from the 25th March 1857, at a rent of 6*s*. per acre, rising by increments of 1*s*., after each four years, to 10*s*. per acre. But the tenants, William and Ford Dixon, did not stay long.

William Howchin, who was factotum both to John and Frederic Knight, throws a side-light on the condition of farming on Exmoor about this time, in a letter written to his master in April 1852, which reveals the hand-to-mouth system of some of the new tenants. 'I am sorry to find that nearly *all* your Tenants are red-hot for taking in cattle to summer on their Farms, being told by some individuals here that it will pay better than anything and their money is certain. Consequently, last Saturday handbills came out by hundreds to keep cattle. Mr. Popple [Barton], Mr. Allen [Driver], Mr. Harrold [Warren], and others get what they can by the sly. All this may be very well as far as it go, but the light I see it in, if carried to extent, is this, your land will not get improved but very little, as they will not go to the expense to break it and *Lime it*, and by not doing so they will not pay themselves nor you.

'I do not know the provisions of your Leases as to breaking and Limeing, but I have been told that one of the new Tenants has been sowing oats without Lime. . . .

'I find that Mr. Smith is not much interested in the stock *you* take in, no further than he is obliged to be in his capacity. The Advertisement he put in the paper, and by which I had my bills printed, I found out was half of it wrong, that is, the dates I was to be at different Fairs and Markets. I went to Barum [Barnstaple] and saw the Editor of the paper. I have made it all right now and got my bills correct, but it has put you to an extra expense of 18*s*. I have three great Markets to attend this week. I hope to have good luck against my *Radical Opposition*.

'I went to look at the Gallon House Farm [Red Deer] to see what grass there were. I found the gates all open last Thursday and in the different fields were 137 sheep . . . I walked away very vexed. I told Mr. Smith what I had seen, who told me he expected to let the Farm [which he did]; if he cannot let it there had better be a Boy daily with a Dog, and to keep fast the gates. . . .

'Mr. Meadows sale [the tenant of Larkbarrow] is tomorrow.'[1]

The up-country farmers who had responded to Robert Smith's advertisements could not stand the strain involved in reclaiming these Forest holdings. It may be that they were inexperienced in the work involved, or it may be true, as has been reported, that they were men of insufficient financial resources who were attracted to Exmoor by Frederic Knight's liberal leases and low rents, without realizing that these were arranged in contemplation of the expenditure entailed upon the tenant. Anyhow, several of them did not see their first rotation through, and few of them survived a second. 'They came in their po'chaises and went in their dung-carts.' Thus the native farmers of the locality summarized the experience of their migrant neighbours. The last farm to be equipped was Pinkery. In 1859 it was let as a holding of 250 acres, at a rent of £62 10*s.* 0*d.* and interest at the rate of $6\frac{3}{4}$ per cent. on the sum of £400 to be expended by the landlord on house and buildings, to Richard Ridd.

During the ten years 1852–62, the rents accruing amounted approximately to £49,000. Of this sum, about £6,300 was allowed to the tenants for making

[1] Howchin seems to have been employed in a variety of capacities. His letter is evidence of the good relations which existed between Frederic Knight and his servants. He inquires after 'Mrs. Knight and Baby'; tells his master of the sport his neighbour Sir Arthur Chichester had enjoyed, in the previous season, with grouse and deer in Scotland, and remarks that he was married in November, 1847, and has four children, all born in the month of November in the four following years, 'which is rather a singular circumstance'; he retails the local news, such as the death of 'old Mr. Litson, of Willsham'. When Simonsbath House was let, he and his wife, who was the cook, 'and a very good one', started an hotel in Dover Street Piccadilly, known as Howchin's Hotel.

fences, breaking and liming land, draining, damage by deer, losses of livestock in the severe winter of 1852–3, and, in the case of the Gallon House Inn, for 'loss of custom'. These allowances reduced the amount payable to the landlord to £42,700, of which only £31,500 was actually received, so that the arrears of rent, all of which had to be remitted, amounted to no less than £11,000—or nearly twenty-five per cent. of the sums secured under the contracts of tenancy. Either the capacity of the Forest for improvement had been assessed too high, or these early tenants were lacking in the ability to handle so difficult a proposition.

Certainly Robert Smith was successful, and he has left a full acount of his experience. 'The first ground selected for culture was naturally near the house and yard, that some few small fields may be quickly broken up for roots and subsequent crops for the yet small but varied stock of the farm. Paring and burning the surface of the soil is the first step (in the right direction) towards improvement; then followed the usual ploughings, harrowings, dressings, etc., for a root-crop, which is invariably a good one. The ashes resulting from the burning of the thick coating of indigenous plants are found to be powerful agents for the production of roots, but little good is really effected without the aid of lime to mix with the fibrous earth, beyond the growth of a turnip of inferior size. By way of testing these matters I determined to try certain experiments with varying quantities of lime, which was the more important to me as I had decided that the amount of money to be expended in the purchase of artificials should be laid out in lime, the *great essential* for newly broken-up land.

'The turnips have usually been drilled fourteen inches on the flat, with a few loads of ashes per acre (collected in the same field), and the crops have fully realized my expectations. In the earliest stage of cultivation and progress, some portion of the turnip land has to be sown with oats for the use of the yard; this should be done in the month of March, and upon land that was first

cleared of its roots, the later eatage of roots being upon those lands that are intended to be sown down with artificial grasses, without a corn crop.

Experiments upon One Acre of Land

On Natural Soil, without Ashes or Lime.	*With Native Ashes alone.*	*Native Ashes and 1 ton of Lime.*	*Native Ashes and 2 tons of Lime.*
Came up weakly and died away again.	Produced 6¾ tons of turnips.	Produced 12½ tons of turnips.	Produced 18 tons of turnips.

Native Ashes and 2½ tons of Lime.	*Native Ashes and 3 tons of Lime.*	*Native Ashes and 3½ tons of Lime.*
Produced 20½ tons of turnips.	Produced 22½ tons of turnips.	Produced 23 tons of turnips.

Time of Sowing, June 1.

'When the farm is sufficiently advanced, I much prefer the following course of cropping:

First year. To pare and burn the natural herbage for a root crop, and apply 2½ tons of lime per acre, mixed in with a moderately thin furrow of soil, say 2½ inches; this will produce 20 tons of turnips per acre at a cost of £4 10*s.* 0*d.*—say £5—per acre.

Second year. My present plan is to seed out all lands after a turnip crop with proper artificial grasses, omitting the corn crop at this stage of culture, and until the new fibrous soil shall have its frolic and become more fixed and consolidated for the growth of corn. When the grass-seeds are sown, it is both desirable and profitable to add half a dressing more lime (1½ ton), for their enjoyment and that of the farm stock when depasturing them; still, it is an extra outlay of capital that must be considered with reference to other expenses when so many other works are waiting to be performed, and these alike with tenants' capital.

'Thus, after the turnips are consumed (chiefly upon the land), the land is carefully ploughed, cleaned, and

sown with artificial grasses and rape-seed, commencing the first week in April. These young grasses will be ready to stock by the end of June, and, if allowed to get well established, they will usually fatten full ten sheep per acre, and if care be taken to clear them occasionally, so that they sweeten and recover themselves, they will prove of infinite value up to Christmas. If they remain clear from the end of September for the ewes and lambs, which is a still better plan, they give a help over the inclemency of the months of March and April, after which they become first-rate pastures for the fattening of any class of stock, and maintain their comparative goodness for several years.

'This plan of farming in an elevated country goes very far to conquer the climate and to enable the farmer to maintain a large and healthy flock of sheep; in fact, it may be said to form the *keystone* to the whole structure —without it, the building is in danger. If any practical man will take into account the newness of the soil, coupled with the preceding management, according to which *no corn crop* will have been taken out of the land, I leave it to him to judge what comparative return may be fairly expected from stock in after years in a hill country remote from corn-markets, but where all animals can readily be fattened and *walk* to market, with the produce of the farm upon their carcasses.

'The grasses to be sown should be those which have the qualifications for quick and abundant growth. During the last few years I have sown the following quantities and qualities, at an average cost of:

	Per Acre.	
	s.	*d.*
2 pecks of Pacey rye-grass, at 6*s.* per bushel	4	6
1 peck of Italian rye-grass, at 6*s.* 6*d.* per bushel	1	7½
4 lb. of Timothy grass, at 6*s.* per stone	1	9
2 lb. of cow-grass, at 9*s.* 6*d.* per stone	1	4
4 lb. of white clover, at 10*s.* per stone	2	10
3 lb. of rib-grass, at 6*s.* per stone		5
Small quantity of parsley-seed		8½
	13	2

'While I believe it is admitted that corn is liable to

HAMPSTEAD
PUBLIC LIBRARIES

IMPROVED GRASSLAND

ARABLE LAND—OATS AND TURNIPS

LARKBARROW

be lodged and spoiled upon new land when sown after the first root crop, it is equally worthy of note that *no land* can well be too rich for the growth of succulent grasses. However luxuriant these may be, they can at all times be overtaken by good management, and kept in good and respectable order; and, as time goes on, these pasture lands may be safely and profitably cropped with corn, especially oats, and afterwards renewed again by roots, &c. These pastures remain good about four years, and then require to be broken up for oats, thus completing a seven years' course of cropping. Then follows the usual rotation again, viz:

	Acres.
1st year, roots—say	30
2nd year, rape and grass seeds	30
3rd, 4th, 5th, and 6th years—pasture . . .	120
7th year—corn	30
	210'

In brief, roots and rape-pastures for the feeding of stock, grown with liberal dressings of lime, comprised his scheme of reclamation, and in eighty years little has been discovered by way of improvement upon it.

Robert Smith was an expert in the construction and management of water-meadows, and the hillsides of Exmoor gave him full scope. 'The red deer are certain to bow their antlered heads before Mr. Robert Smith and his water-sluices', wrote the 'Druid' on the occasion of a visit to Exmoor in 1860, but it is the latter rather than the former which have given place. There was nothing, probably, in the work here to differentiate it from the practice in other districts, so that it need not be particularized, but, as an example of his thoroughness, some tests made by Robert Smith to find out if the effects of irrigation were due in any way to the temperature of springs may be quoted. He remarked that several springs were known by the old men as 'warm-springs' and were said to be hot in winter and cold in summer. 'This assertion, together with the striking effects produced by certain springs, first led me to an inquiry as

to their prevailing merits, and hence I determined upon testing their temperature, as also the rivers Barle and Exe, at the foot of the hills upon whose summit the springs in question are situated.

	25 *June* 1854.	4 *Sept.* 1854.	19 *Dec.* 1855.
Temperature of Picked Stones Spring, at point of issue	47¾°	49°	47¾°
„ „ Picked Stones Spring, at point of junction with River Barle, 110 yds. below	45°	57°	38°
„ „ River Barle at same point .	42°	65°	—
„ „ Spring above River Exe, at point of issue	46°	46¾°	46°
„ „ Spring above River Exe, at point of junction with the river, 254 yds. below . . .	40¼°	61¼°	—
„ „ River Exe at same point. . .	40°	64°	—
„ „ Stagnant bog-water	39½°	—	33°
„ „ Air	40°	65°	30°

'The average temperature of the Exmoor springs may be written at 46° to 46½°; and such is the importance of warmth that before testing a spring an experienced hand will decide upon the degree of heat by the verdure or quality of the grasses springing at their edge and onward course to the brook. Nothing can exceed the effects produced below the Picked Stones Spring; and the growth of the succeeding grasses, from stage to stage, clearly demonstrate the cooling of the stream as it becomes assimilated to the air.'

Robert Smith points out that irrigation serves two purposes. Water from springs at temperatures above that of the soil-water stimulates an early growth of grass, before nature has started the herbage into life; storage water applied in the summer and autumn promotes a later growth of grass, when plant life is still active and requires only moisture to keep it productive.

While this ringing of the changes amongst his farm tenants was going on, Frederic Knight was making what use he could of the hill-land for summer grazing.

The pony stud had been brought up to some 400 head, and until the plan of annual sales at Simonsbath gave place, owing to inaccessibility, to the practice of sending the annual draft to Bampton Fair, it was disposed of in the field where now stands the church. 'Squires and clergymen, horse-dealers and farmers, from Northamptonshire and Lincolnshire, as well as South Devon and the immediate neighbourhood' attended these sales. In spite of the trouble taken to improve the stud by the introduction of well-bred pony sires, the prices realized were poor in the main, and the returns from this branch of Exmoor farming were unremunerative. The letting of the best land drove the ponies more and more on to the hills, where the conditions of life in winter were too rigorous for any but those mainly pure Exmoor bred. Three cattle and pony herds were employed.

As to summer grazing with cattle, the hills would keep one full-sized beast to three acres from the 1st May to the 1st October. Any number of them was forthcoming from the neighbouring corn lands and dairy districts, the farmers of the latter placing out their yearling heifers, and those of the former their steers and in-calf heifers. Other farmers again, from places more remote, would consign their better animals to these men who were sending their rougher cattle up to the Forest, paying them a rate for 'best keep' about double that which they, in their turn, were charged by Frederic Knight. There was thus a double movement of cattle northwards, during summer, from mid-Devon towards Exmoor.

The rates charged for depasturing upon the Forest during the grazing season were as follows:

		£	s.	d.
Cattle:	Three years old and upwards	1	0	0
	Two years old, and under three years		15	0
	Yearlings, and under two years		12	0
Sheep:	Any age, including young lambs and shepherding		2	3
Horses:	Any age	1	5	0
	Ponies for the summer		15	0
	Ponies for twelve months	1	5	0

This business was very profitable, and this explains the resentment of William Howchin at the competition he encountered from the tenants of the new farms. But Robert Smith has recorded that there was no difficulty in getting a sufficiency of stock,[1] and Albert Pell, who visited Simonsbath about this time to attend one of the pony sales, noted that 'on the moor itself, cattle were taken in to joist, and the sums realized seemed to have been steadily rising. Beginning at £400 a year, they had gone up to £500, £1,000, and at last to £1,400. Ewes bought at 16*s*. produced lambs which went off at 27*s*.'

Notwithstanding the scheme for the colonization of Exmoor by letting off land, intensive farming by the landlord continued, and Frederic Knight has left full notes of his system of sheep-farming which entitles him to be regarded as the pioneer of the method known, in more recent times, as 'continuous cropping'. Writing about the year 1851, his instructions were—'Plough 4 inches at the end of September, press if possible, and sow winter vetches, manured with guano, in two equal parts at a week's interval, in the last week of September and the first week of October; a little rye with the vetches of the first sowing. The first half to be fed off about 1st April, and when the sheep are removed to the second sown vetches, the land to be ploughed for swedes; when the sheep are removed from the second sown vetches to the young grass, the land to be prepared for yellow turnips. While the sheep are eating vetches, rape and seeds to be sown in two equal parts at 14 days' interval, commencing first week in April, upon land that was in yellow turnips, ploughed not more than 2 in. or 2½ in. deep. The rape will be fit to stock about the middle of July, and the most forward sheep come to it off the grass. The sheep to be sold fat off the rape, and lambs bought in. Begin to eat yellow turnips in October; then swedes till April.' In other words, Frederic Knight's practice at this time

[1] Parson Jack Russell figures as depasturing horses on the Forest in the accounts for the year 1851.

was to buy lambs in the autumn, and to fold them on yellow turnips till Christmas, and then on swedes till the end of March, when they started on the vetches. From these they went on to the young grass (last year's rape and grass) and next, about July, on to the new rape pastures, upon which they were finished. To what extent this time-table was possible in practice does not appear. Modern experience has proved that the vagaries of the seasons tend to defeat such accuracy in planning.

Steps were taken at this time to abolish the fallow deer, kept in the Deer Park, between Blue Gate and Prayway Head. In spite of the loss of fawns by stealing, of which John Knight complained, the deer had done well on Exmoor; but it was impossible to confine them, and as the cultivation extended so the damage done by them increased. All through this period, entries in the estate cash account of payments for 'deer damage' are common, and the allowances made to tenants recorded in the rental include considerable sums, deducted from rents due, in respect of the same. On the Forest the tenants of Warren and Horsen farms seem to have suffered most, but the fallow deer did not confine their attention to Frederic Knight's estate, for they wandered further afield and caused much annoyance to neighbouring farmers by 'slithering' the ears of their corn crops and by other forms of damage. So their destruction was resolved upon, and none have survived. There are some good heads of Exmoor fallow deer at Wolverley, each with the bullet hole in the centre of the forehead.

As regards the indigenous wild red deer, their numbers had fallen to a very low figure on Exmoor at this time, and they were in danger of becoming extinct. It was a bad period in the history of stag hunting; from 1837 to 1855 there was a constant succession of masters—varied by short spells when the country was not hunted at all—and poachers and deer-stealers took a heavy toll. The Knight family were staunch supporters of the hounds; John Knight figures in a list of subscribers to the old pack, sold in 1825, and Frederic Knight had

hunted with it when a boy. 'Miss Turner writes that the Duchess of Bedford saw 70 head of Red Deer one day at Brendon. What a fine sight! Can it be true?' —inquired Charles Knight, writing from Leghorn, in 1844, to his brother Frederic. Probably not; anyhow it was only nine years later that Samuel Sidney, staying at Simonsbath, saw 'a great red stag', with four hinds and a calf, and remarked that 'these were one of the few herds still remaining on the Forest. In a short time the wild deer of Exmoor will be a matter of tradition. The efforts made, at great cost, by Mr. Knight for the preservation of the deer, do not seem to have been supported or appreciated by the gentlemen of the district.

'We had hoped to have a day's wild stag hunting, but the Hunt Committee had had the incredible barbarity to catch a wild deer, put him in a cart, and carry him to the other side of the country.'

The Rev. W. H. Thornton has recorded that, in 1848, the estimate of the number on all the Exmoor Commons was thirty head, with thirty more round Haddon, and a few on the Quantocks. Fortunately for the preservation of the largest and most beautiful of English indigenous wild creatures, stag hunting was on the eve of a new era in its history, and instead of becoming extinct as Samuel Sidney foretold, the red deer are more numerous to-day, probably, than at any period within the past century. But nothing other than regular hunting can preserve them from the fate which has overtaken them everywhere else in England.

It was during this period that most of the plantations were formed. The need for them was a subject for comment by Sir Thomas Acland, in 1850, and Samuel Sidney, writing a few years later, notes the presence, here and there, of young plantations 'but no trees of sufficient magnitude to deserve the name of a wood'. These, and the rapid extension of inclosures, with their high walls surmounted by beech hedges, soon added to the shelter of which the district was so much in need.

Altogether, about 100 acres were planted up in various places.

The years 1851–66 mark the most active and important period in the story of Exmoor reclamation. Practically all the farms were made and occupied during this time; tenants came, and unfortunately went; the system of farming which was ultimately to succeed began to be evolved. The search for iron ore began; as will appear presently, mines were opened and the Forest had its first and only experience of industrialism, but, as with the farmers—though much less regrettably—the force of the invasion was soon spent. The growth of population due to all these activities led to the formation of the civil and ecclesiastical Parish of Exmoor out of the extra-parochial district comprised in the ancient Royal Forest, to the erection of the present church of St. Luke and the parsonage, in 1857, and to the nomination of the first perpetual curate. A school had already been built by Frederic Knight, and, with the appointment of overseers of the poor and the first assessment of the parishioners to poor-rate, Exmoor experienced, for the first time, all the advantages, both spiritual and temporal, of rural parochial society.

The work that devolved upon Frederic Knight during this time must have been immense. He was a member of Parliament all the time, and for part of it Secretary to the Poor Law Board; he conducted lengthy and difficult negotiations with the South Wales ironmasters who became his mineral lessees, and the lawsuits in which, subsequently, he became involved with them must have caused him much trouble and anxiety; he was a director of a large life insurance company whose affairs became seriously involved. Over all, for the first ten years of the period under review, he was answerable for all his administration of the Forest to a receiver, appointed by the Court of Chancery, in connexion with the family action which was entered over his executorship of his father's will, and he was liable to be called to account for everything that he did.

Physical and mental vigour of an exceptional order would be needed in any one to stand such a strain, and Frederic Knight was well endowed with both. He lived at Lynton while Simonsbath House was let, first to Charles Le Blanc, and then to the Rev. J. Torr, who was curate to the first incumbent, the Rev. W. H. Thornton, but when Mr. Torr vacated, in 1860, Frederic Knight made the old house his Exmoor head-quarters once more, and it was never let again in his lifetime.

VI

1867–79. RAPE RECLAMATION AND SHEEP RANCHING

IN 1866 Robert Smith retired from the Exmoor agency. He had spent eighteen years at Emmett's Grange, going there when farming on the Forest, as implying tillage, was in practice only at Cornham, Simonsbath Barton, and Honeymead, and remaining to participate in the evolution of all the other holdings, the erection of the greater part of the village of Simonsbath, the mining adventure, and the creation of the civil and ecclesiastical parish of Exmoor.

In the later years of his stewardship the system of husbandry appropriate to the district was becoming clearer. Robert Smith had always been an advocate of stock farming as the only objective possible at this elevation, and the real question was how to produce keep for sheep and cattle all the year round within the economic limit. His own practice was by the growth of turnips, followed by rape-pastures left down so long as they would endure; and he had witnessed the coming and going of other farmers who had sought in vain to establish the methods of other districts. These up-country tenants had been replaced, one by one, by men from the neighbourhood, some of whom had come to see the possibilities of farming on Exmoor at Frederic Knight's low rents, whilst others were men who had spent their lives on the Forest and had accumulated some capital in it. One of these began as an ox-boy on Honeymead, and later became a postilion in John Knight's stables at Simonsbath; another, who occupied Warren, had been one of the cattle-herds; a third came first to Exmoor to work in the nursery; a fourth, after working as a day-labourer for Frederic Knight, had saved money as a lime-burner before taking Picked Stones.

There was never any period during which all, or even

the majority, of the farms were in hand, as is so often asserted; tenants were always forthcoming for the more attractive holdings, and the gross rental at the end of Robert Smith's time was about £3,600 per annum. Nevertheless, several farms had come back to the landlord, and were apparently unlettable at the beginning of the period now to be considered—Larkbarrow, Tom's Hill, Duredon, and Winstitchin, whilst before long, Pinkery, Titchcombe, and Wintershead also fell vacant. In addition, there were still the great tracts of open Forest land, extending to some 8,000 acres, which were only utilized by the pony stud and for summer grazing by stock at agist. The mining and the railway to Porlock, of which so much had been hoped, had come to nothing; although the gross return was considerable the net income from the estate was practically *nil*; clearly something had to be done about it.

Frederic Knight found a successor to Robert Smith in Frederick Loveband Smyth, the tenant of Wistlandpound farm, in Kentisbury, under Earl Fortescue. In the year 1857, Challacombe Common had been inclosed, and several hundred acres of waste land, composed of peat, varying in depth from twelve to thirty inches, and resting on the usual impervious clay-iron pan, were added, thereby, to his farm. He determined upon the cultivation of this land, and his experiment in its reclamation was based on the substitution of rape for Robert Smith's more expensive turnip crop, with all the preliminary cultivations and after care that it entailed. The practice Smyth developed, first at Challacombe and later on Exmoor, was to pare, burn, and plough (once) the wet peat-land, and then to sow rape-seed, with lime at the rate of about three tons to an acre. The seed was sown in June, and it produced a crop in six weeks, being the only crop that would grow before the land was laid dry, whilst it was claimed that the tap-roots penetrated to the pan and even pierced it. This crop was eaten off by sheep, and the same practice, rape-sowing and sheeping, was repeated during the next

three or four years. By this time, the combined effects of cultivation, liming, sheep-treading, and penetration by tap-roots are described as having 'decomposed' the peat right down to the pan, which was then broken up with the subsoil plough. A sowing of rape and grass seeds, mixed, followed, and the land was thus laid down to permanent pasture. The grasses recommended as being most suitable on this improved peat are 'Timothy grass, Yorkshire fog and Cock's foot, with rye-grass and perennial clovers'.

Rape-pastures were no new thing; the system of sowing rape with grass-seeds had been practised with success by Robert Smith, and had been known in the district for many years. But the idea of reclaiming moorland by successive crops of rape, eaten down by sheep, was entirely that of Frederick Smyth. Many commons partly composed of peat-lands had been inclosed in North Devon and West Somerset during the first fifty years of the past century, and although much of the dry brown-peats had been broken up and cultivated, every attempt to reclaim the black-peat lands had failed to produce the immediate return needed to justify the farmer in this task, and most of them remained in their natural state until Smyth's introduction of these lime-grown rape crops. 'Nothing on these hills', wrote Samuel Sidney, who visited Exmoor ten years after Smyth had taken over the agency, 'feeds sheep so surely and so rapidly as this rape crop. Sheep turned on it have been known to increase in value from 3*s*. to 4*s*. a week, and on an average may be calculated to gain 2*s*. in that time.'

It must be remembered that in the earlier part of last century the principal object of the farmers of Exmoor and the surrounding country was the production of wool, and mutton was only a secondary consideration. This is not extraordinary, seeing that there were no markets other than the local ones, which might on any day be glutted by an extra consignment of fat sheep. So ewes and wethers alike were often kept on the com-

mons until they died of old age, and it was the interest of every farmer to winter as many as possible, however thin they grew, so long as they remained alive to be turned on to the hills in spring, and give him another clip. The rape-reclamation came into practice at a time when the increasing demand for meat for the supply of distant markets, together with the improvements in transport, were encouraging the hill-farmers to think more of mutton, and it assisted to bring about something of a revolution in their methods of flock management.

Frederic Knight resolved upon the replacement of the pony stud by sheep. 'The attempts which he had made with great perseverance and more than ordinary knowledge of the principles and practice of breeding, to improve the size and quality by using stallions of a superior character, did not pay. So long as the ponies were treated as wild animals, finding their living on the open moor, helped with a little forest hay in the rare snowstorms, they cost next to nothing; but so soon as they were improved in breed it was found necessary to feed them well in winter on hay and roots, grown on reclaimed land, and even with corn, if they were to grow into animals of any value. If crops had to be grown for feed, it would evidently pay better to feed flocks, whose ewes would give a fleece and a lamb every year.'

Frederic Knight experimented, at first, with a flock of some 500 Exmoors on Winstitchin, but the local breed could not be wintered on the Forest, and once more he travelled to Scotland in search of a type more suited to his purpose. After many inquiries he decided to bring down a flock of Mountain Blackfaces, and to give another trial to the Cheviots—a breed with which his father had experimented some thirty years before; and, as related already, he had seen flocks of both kinds on Exmoor more recently, when one of his first tenants stocked a large allotment on the Forest with them, and brought down Scottish shepherds, with their dogs, to herd them. All the unlet portions of the Forest were

HAMPSTEAD
PUBLIC LIBRARIES

THE LAST OF THE BORDER SHEPHERDS

THE SECOND GENERATION

to be stocked with these sheep, and again Scottish shepherds were to be engaged to tend them. The North Devon men of this day made indifferent hill-shepherds, possessing but little of the practical science which distinguished the Scottish hill flock-masters; and so shepherds from the Highlands and the Border—Davidsons, Johnsons, Grahams, McDougals, Littles, Murrays, and Gourdies—found their way to Exmoor with the sheep amongst which they and their forebears had been raised.

The black-faced sheep were placed on Hoar Oak, and then Winstitchin, Duredon, the South Forest, Larkbarrow, and later, as they came in hand, Cornham (1873), Pinkery (1873) and Wintershead (1885), were stocked with Cheviots—each as a separate herding in charge of its own shepherd. These men were accommodated either in such of the farm houses as were empty, or in cottages convenient to their work. Each was allowed a cow, and grazing ground, and they settled down, with their wives and families, under conditions not dissimilar from those of their native land. Most of the sheep came by boat to Lynmouth, but the last large purchase of Cheviot ewes, which arrived on the Forest in 1871, was trucked so far as Bristol, and then driven by its kilted shepherd over the eighty miles of road to Simonsbath.[1]

Thus began the third and last experiment in Exmoor reclamation, the conversion of the Forest grass into permanent pasture for ranch-farming with hill-breeds of sheep.

Altogether, some 5,000 Blackface and Cheviot ewes were brought down to Exmoor. The permanent flock consisted entirely of ewes, and the practice was to keep them until five years old, when they were fatted, with

[1] John Gourdie, the shepherd who brought down the last consignment of Cheviot sheep to Exmoor, is now tenant of Wintershead, the farm on which Gerard Spooner had once before experimented with Cheviots and Blackfaces. Little, another of the original shepherds brought down by Frederic Knight, is living in retirement at Castle Hill. His descendants of the second and third generations are in Earl Fortescue's employment on Exmoor, in charge of the descendants of the original Cheviots.

their lambs, for the butcher. In the last year, the lambs were got by a Shropshire Down or a Leicester ram; for the rest of the flocks only pure-bred Cheviot rams were used, a number being purchased in Scotland every third year. The Blackfaces survived for a long time on Hoar Oak herding, but by degrees they were superseded everywhere by the Cheviots.

The Scottish sheep were much more hardy than the native breeds and found a living on the Forest in all weathers, except in snow-storms, which are rare in comparison with the North of England. Mowing and hay-making machines were introduced on to Exmoor now, for the first time, and proved of the greatest value in a district where the supply of grass is almost unlimited, where labour was scarce, and where the days on which hay-making is possible are few and uncertain. With the use of this machinery a large quantity of the natural Forest grass was turned into hay good enough to keep these mountain sheep in hard winters. All the grass not cut was burned periodically.

Frederic Knight's object, like that of his former tenant, Gerard Spooner, before him, was to get his annual draft, both ewes and lambs, fat for the butcher or as near to that condition as possible, on the rape and grass. The rape came into use by midsummer if sown early in May, but it was liable to be taken by fly when grown so early, and Frederick Smyth preferred sowings made from June to August. Ewes and lambs fatted on it without roots, corn, or cake, and went off to market, alive or dead, between August and November. By the latter month the whole of the draft was expected to be sold, as the rape could not be relied upon after that date if the weather turned frosty. Frederic Knight experimented at this time with thousand-headed kale, which was then just becoming known, with the object of filling the gap from November onwards with another cheaply grown crop, but apparently without much success.

Some of the lambs were purchased on the spot, by

butchers and dealers who came to Simonsbath for that purpose. The rest were driven to South Molton, where they were killed and dressed, and the carcasses forwarded to the Metropolitan Meat Market hung in meat-vans provided by the Great Western Railway. It is said that the meat was in special demand by reason of its superior flavour.

Turning, now, to the fresh start in the reclamation of the Forest by rape cultivation which marked the advent of Frederick Smyth, the first work was carried out in 1868, on Duredon, where one hundred and forty acres were cultivated and sown. The crop was fed, and rape was then sown again with grass seeds, which were fed for four years, and then mown for three more, yielding in the seventh year two tons per acre of excellent hay after a dressing of 1½ cwt. of nitrate of soda and salt. The great object of the reclamation was the production of permanent pasture, and it was found that the rape pastures, when established, could be maintained by occasional dressings of lime. Couch-grass was unknown on Exmoor, 'and so grassy is the soil that a well-limed fallow will find its way into good permanent pasture without a grass-seed being sown on it'.

So far work had been confined to the dry land, and the areas broken up and sown to permanent grass were selected so that they could be added to existing holdings if desired. By 1874 the success of the experiment 'had made urgent the necessity for breaking-up and subsoiling extensive tracts of the wet peatland, for conversion into permanent pasture.

'Already a great break had been made in North Devon agricultural customs by the introduction on the hills of such advanced implements as iron wheeled ploughs, mowing machines, and hay-making machines. The time seemed to have arrived for trying if steam could not do quickly, effectively, and economically, what ox-teams had done slowly and expensively in 1824.' Thus Samuel Sidney, who visited Exmoor in 1853, 1875, 1876, and 1877 as Frederic Knight's guest, to

study his work. The account of the last phase of land reclamation on the Forest, the harnessing of steam-power, to the task, is best given in his own words:

'Having decided on trying steam, Mr. Knight had the difficult task of selecting from the various rival makers and systems the best machinery for his purpose. He found that Fowler's double-engine set had the advantage of going at once to work without any preliminary fixing of machinery, as well as the immense power of a straight and single action, so necessary in carrying out the Duke of Sutherland's bold determination to manufacture arable land out of deep peats accumulated during centuries over the rough debris of perished forests. But in order to use double engines, nearly parallel roads or tracks, along which the engines can travel, are necessary, and such did not exist on Exmoor. To make such roads would have been very costly; and as Mr. Knight's object was to cultivate for permanent and improved pasture, and not to establish tracts of arable land, they would become useless in a few years when the final object of the reclamation had been achieved. On the other hand, the number of men required for working all the old roundabout systems rendered their employment too costly.

'So stood the matters until, at the Taunton Show of the Royal Agricultural Society in 1875, Messrs. Barford and Perkins exhibited a new system, invented by Mr. F. Savage, C.E., of King's Lynn.

'After careful inspection of the ground to be ploughed, Mr. Barford undertook to construct a 10-horse engine and set of tackle to work Messrs. Fowler's Sutherland or Marshland plough on Exmoor. The trial took place, to Mr. Knight's complete satisfaction, in 1876. The principle of reducing the speed to meet an extra heavy strain makes this 10-horse engine master of all the power needed—and by passing the large subsoil-hook along the bottom of an empty furrow, instead of ploughing and subsoiling at one operation, the whole tackle is relieved from a strain that might be detrimental to it.

In some wet places this hook has succeeded in grubbing the subsoil nearly three feet below the original surface.

'The ploughs, both the marshland and four-furrow plough, used by Mr. Knight, were made by Messrs. Fowler of Leeds, and so good are they, that no stone has yet been met with in the process of steam-cultivation on Exmoor that has seriously damaged either of them.

'Mr. Savage's system does away with the heavy detached drums which form an essential part of all the old single engine sets, and he has arranged the road driving-wheels so that they can be used, when ploughing, as most efficient winding-drums, the ropes working in boxes sunk in the wheels, and the end of the engine being blocked up as a platform while at work. By this arrangement the entire machine is simplified, the boiler is spared the strain it is subjected to when the winding-drum is attached to it, and the large driving-wheels do all the work, whether on the road or in the field. The road-wheels can be driven either together or one at a time, or one forward and the other backward, so that the engine can actually be turned by steam on the ground on which it stands. But the invention that makes this engine more particularly suited to Exmoor is, that it has a very low speed-gear attached to it, by which it can be lifted in a very few minutes out of any hole or bog into which it may have sunk. The ploughing-tackle is worked by Campain's anchors, moved by chains and balls, on Mr. Savage's latest plan. If, then, water can be led along a plough-track to the foot of the engine, which can frequently be done on Exmoor, the engine and rope take only one man to work it. The Campain's anchors are pushed forward by the balls at the discretion of the ploughman; and although a spare man usually attends the plough, to carry the signal flag, to manage the rope-porters where needed, or to turn a stone out of the way, the set can be worked under favourable circumstances for half-a-day with two men only—one with the engine and the other with the implement. The men who now work the apparatus success-

fully were agricultural labourers when Mr. Barford came to Exmoor. Compared with the six or seven hands usually employed with the old roundabout sets, the advantage is immense. The engine works with a very small quantity of coal.

'Passing over the details of what might make a very interesting agricultural tale under the title of "Adventures of a Steam-Cultivator on its Journey through Devonshire Lanes and over Somersetshire Moors", it will be enough to state that, in the autumn of 1877, the engine working a Sutherland plough by a roundabout apparatus, was in steady work in exterminating some 400 acres of natural forest grass growing on a skin of primeval peat, nearly all moist, and in some parts with the water standing for an acre or more ankle deep.

'This Sutherland plough consisted of two huge shares, that is, one at each end of the implement, and also at either end a subsoiler in the form of a fluke of an anchor without palms, the whole resting on four barrel-like wooden rollers, which acted as wheels as well as rollers. The engine having been by signal set to work, the plough was slowly dragged forward between two automatic anchors, cutting a huge slice of peat, and making a furrow 12 inches deep and nearly 2 feet wide; the sod, as it was turned over by the plough, being rolled flat by the barrel wheels. When a double journey had been performed forwards and backwards, the machine was stopped, and one of the hooks let down; and this, in nine cases out of ten, reached, penetrated, and broke up the before-described *pan*, and, with one effort, thoroughly dried, and for ever, the peat which had already been destroyed by being torn from its roots.

'The result was equally wonderful and capital. When the subsoiler was set in motion the water stood in pools several inches deep. The moment the iron had penetrated the pan the water passed away as through a cullender, and it remained perfectly dry after rain for some part of every day of the week. The work was done

HAMPSTEAD
PUBLIC LIBRARIES

at the rate of nearly three acres a day, for it is one of the peculiarities of Exmoor that "rain does not stop ploughing".

'In the opinion of one of the most experienced land-agents in North Devon, the one operation just described doubles the value of the land.

'The next steps would be to cross it with a plough or cultivator, then to break it up roughly with a strong harrow, to lime it at the rate of $2\frac{1}{2}$ to 3 tons an acre of lime drawn by Mr. Knight from the kilns at Combmartin or Lynmouth, with his own horses,[1] and finally to sow a crop of rape to be fed-off with sheep. After two or three crops of rape, paid for in fat lambs, the land will be ready to lay down for permanent pasture, requiring no further expense for drainage and no manure beyond lime, which is essential, because the natural soil, being almost devoid of the calcareous element, will not grow the most nutritious grasses until limed.

'As to the proportionate extent of deep peat on the last reclaimed tract, Titchcombe—an enclosure of 400 acres broken up by steam power—there were about 50 acres which could only be broken up and drained by the Sutherland plough and hook. Six or seven acres are so deep that they will require tile or stone drains. About 150 acres have been cultivated and the land laid dry by a four-furrow plough, connected by a chain in hauling the last furrow with a light subsoiler, formerly worked by four horses. The rest of Titchcombe could have been broken up by horse or ox labour; but the steam-engine being at work, it saved time to use it.

'The following is as nearly as possible the actual cost of ploughing and subsoiling 19 acres of the above-mentioned land on the west side of Titchcombe; this being part of 400 acres that were effectually reclaimed up to Christmas, 1876:

[1] Four of these in 1876 were grey French mares [Percherons], drafts from the General Omnibus Company's stock, bought by Samuel Sidney for Frederic Knight, lame from London stones, and worked sound on Exmoor.

Cost

	£	s.	d.
2 Men, 20 days at 3*s.* 2*d.* each per day	6	6	8
1 Youth, 20 days at 1*s.* 8*d.* per day	1	13	4
2 Boys, 20 days at 1*s.* each per day	2	0	0
8½ tons of coal at 20*s.*	8	10	0
4 gallons of best oil at 5*s.*	1	0	0
2 gallons of common oil at 3*s.* 3*d.*		7	8
Interest and Depreciation on tackle, 14 days at 15*s.* per day	10	10	0
Interest and Depreciation on tackle, 6 days, when worked for a few hours only each day at 5*s.*	1	10	0
Total	31	17	8'[1]

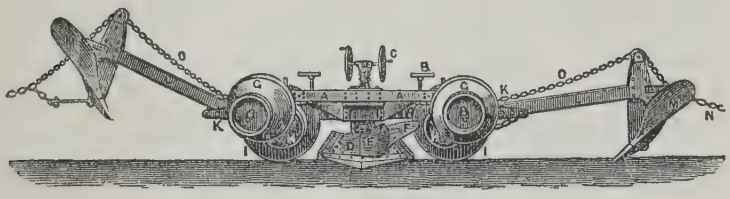
The Sutherland plough, as briefly described above, was manufactured by Messrs. John Fowler and Sons, Leeds, to participate in the great scheme of land reclamation carried through, in , in the seventies of last century, by the Duke of Sutherland. It superseded the multiple furrow plough, which had proved quite unsuited to the conditions.

'The first step in adapting the steam-plough to work in a peat bog was the substitution of a single monster turn-furrow for the four or five usually carried. To prevent the implement burying itself in soft ground, the frame was next supported on very broad wheels or rollers. It was then found to work fairly where there were no obstructions, but whenever the share struck against a landfast rock or root it was liable to receive some serious injury. To meet this, the revolving coulter was invented by Mr. Wright, the Duke's secretary. It consists of a vertical disc of steel placed in front of the sock, and cutting the soil, as it revolves, to a depth of about two inches below the point of the sock. When this revolving coulter meets with a landfast stone, or with a root too large for it to cut through, it revolves over it, thus lifting the plough clearly over the obstruction. The cutting disc has proved to be better adapted for cutting through the tough mat of grass and heath roots often found on the surface than any fixed coulter of the ordinary form.

'The next improvement was suggested by the Duke. It consists of a huge iron hook, like the fluke of an anchor, trailing behind the plough, and pivoted on the back of the iron frame-work of the implement. This contrivance, commonly called 'the Duke's toothpick', acts as a subsoiler, stirring the soil to a depth, varying with its hardness, of from 8 to 18 inches. Every obstruction that the revolving coulter has been unable to cut through or to force aside is next attacked at a lower depth by the toothpick. In most cases the root or stone is at once turned over and brought to the surface; but as this cannot always be done, the hook is made of sufficient strength to

[1] About 33*s.* 6*d.* per acre. But, as Earl Fortescue has pointed out, this cannot have represented the whole of the cost of turning the moorland into pasture.

withstand the full power of the engine. There is a dead pull for a minute, then the engines are reversed, the implement is backed, and a second attack is made. If this also fails, the toothpick is lifted over the obstacle, and a stake is driven in, to mark the spot till the offender can be blown up by dynamite. At first the stirrer was made to terminate in a steel point; in 1877 a small short turn-furrow was attached; and this was replaced in 1878 by a turn-furrow of an ordinary shape but of extraordinary size.



The Sutherland Plough

The accompanying figure is drawn from a photograph showing the whole of the implement, standing upon a hard surface, but with its parts arranged for travelling towards the left. AA is an iron frame, about 10 feet long and 18 inches wide, carried upon six rollers. The ploughman sits upon the seat B, facing his work, and steers by means of the handle at C. The head of the plough, D, is hung from the centre of the frame and is double-ended, having a lateral cutting-share of a triangular form, so as to cut either way. To the centre of his head the mould-board E is hinged; it is self-acting and turns either way to suit the direction of the plough. Of the six rollers, two [not visible] are for the land-side, two, G G, press on the top of the furrow, while the two, H H, in the centre, in connection with the revolving coulters, form the steerage. The revolving coulters, I I, are seen projecting beyond the middle rollers, which they bisect. They are flat iron discs, about 3 feet in diameter, rotating upon the same axes as these rollers, but can be made more or less eccentric with regard to them, so that they may be set to penetrate from 4 to 15 inches deep. The two land-side rollers give balance to the implement, and assist in carrying it through gullies or other inequalities of the surface. The two furrow-wheels assist in completing the turning of the furrow after it leaves the mould-board, and press it into its position; they also assist in balancing and guiding the implement. At each end of the frame, which is a strongly trussed structure of malleable iron, the lateral pieces are united together by a transverse iron bar, K, which passes through, and serves as a pivot for the end of the shaft, L, of the trailing subsoil plough, M. This second plough is kept down to its work by the tension of the tail rope, N, acting on the loop line of wire-rope, O, which passes over the plough and connects the tail of the pulling ropes. It will be seen that the pull for drawing the imple-

ment is taken through the plough beam; and when it is required to be reversed, the engine pulls the one plough out of work, while it presses the other, by means of the looped line, into its place for working. The effect of having the plough hung in the centre, K, and kept in its work by means of the pressure of the tail rope, is to give an elasticity to the working of the implement, and to allow it to override obstructions that cannot be pulled out. . . .'

Gradually the sheep evicted the ponies which were reduced from 400 to about 40 brood mares, whose produce were sold annually as foals instead of being kept till three or four years old, and by 1879 the summer and winter pastures in hand, with the additional rape crops, were being consumed by some 9,000 ewes and lambs. Steam cultivation and subsoiling had broken up and reclaimed several hundred acres on Duredon, Titchcombe, Prayway, and Ashcombe, and were rapidly preparing further wild land for crops which would have enabled the breeding flocks to be increased by at least one-half. 'These substantial improvements have not been executed without the "master's eye". For many years, Mr. F. W. Knight has spent the greater part of the Parliamentary recess on Exmoor, superintending the details of his pastoral and agricultural innovations in person.'

His agent during this period, Frederick Loveband Smyth, died in 1877. For several years prior to this date, he had been assisted in his work on Exmoor and elsewhere by his son, George Cobley Smyth, who later added the name of Richards, and he succeeded his father at this time.

VII

1880–97. CARRYING ON

PROBABLY the high-water mark of farming on the Forest had been reached in the period just closed. Except for the farms already enumerated (page 86), all the agricultural holdings were let to native farmers who knew the district and its capabilities; there were tenants, also, in the cottage holdings at Simonsbath, and several of the large inclosures, such as Long Holcombe and Sparcombe, were let to men from neighbouring parishes, for the value to them of the summer grazing. The untenanted farms and the open lands upon the North and South Forests were employed in a profitable system of sheep-farming in the owner's hands. Further reclamation of these unimproved lands by steam cultivation was going forward. Exmoor had shared, at last, in the general prosperity of agriculture during two decades and more.

When John Knight bought the King's Allotment, in 1818, and other lands adjoining it, the gross income of the whole of the Royal Forest was about £350, and there were five people resident on it. Sixty years of reclamation and improvement had turned three-quarters of this wilderness—the 16,000 acres representing his acquisitions—into an estate with a gross rental of some £4,500 per annum (of which £2,500 was from lands let), which was providing both a living and a life for nearly three hundred souls.

From this point onwards a general slowing down has to be recorded. In 1879 Frederic Knight had lost his only son, at the age of twenty-seven, and the blow was a very severe one. The rape-reclamation and the Scottish sheep had proved a success, and his object was to extend the system to its limits, so as to build up a property which he could hand on to his son as a profitable estate. The story current that he stopped the

steam ploughs on the day of his son's death and never worked them again, is not literally true; on Honeymead Allotment and on Titchcombe further work was done, and the last land to be broken was about sixty acres on Parson's Allotment. Then, however, the steam tackle was laid up, and though it is said that, shortly before his death, he was having the plant overhauled with a view to bringing it into use again, no further cultivation was done. The Forest had settled down to a state more or less stabilized as regards its agriculture.

As regards the farms let, the same generalization can be made. The years now passing under review were bad times for English farmers. Wheat, which in the years 1876–8 was selling at an average price of 49*s.* 9*d.* per quarter, made only an average of 24*s.* 1*d.* per quarter for the years 1893–5; mutton of first quality dropped in the same period from 6*s.* 11*d.* to 5*s.* 9*d.* per stone (or 20 per cent. in first and second qualities and 30 per cent. in inferior), whilst wool showed a decline of upwards of 50 per cent., taking average figures for the country. Exmoor farmers were not affected by the drop in corn prices, and in common with the stock-farmers of other districts they were better able to face the general decline in agricultural values than the arable farmers; moreover, they were 'family farmers' as a class, with little or no labour to pay, and if a fall in prices meant a tightening of the belt for them, they were able to escape the financial disaster which overtook so many of the more highly developed farming enterprises of the valley country.

Cornham had come permanently in hand in the year 1873, for the first time since it had been let in 1844, but all the rest of the tenanted holdings were carried on as such. With this, Frederic Knight's farming operations reached their maximum extent. The land he occupied was divided into eight 'herdings', as follows: Tom's Hill; Larkbarrow; Hoar Oak; Pinkery; Cornham; Duredon; Winstitchin; Wintershead. On Tom's Hill, Larkbarrow, and Duredon, two shepherds each were employed, the rest had one each. The new

land broken up and the old inclosures were tilled almost entirely for sheep-keep.

It was Frederic Knight's practice, at first, to grow a considerable breadth of oats on these lands, but, owing to the frequency of failures, the acreage was reduced to that which was needed for horse-keep. His final and best system of cropping was to farm for a ley: rape or turnips; rape and seeds; seeds-ley left down so long as it would stand. There was no hard-and-fast rule as to the duration of the ley, and when it had to be broken, oats were taken, and the rotation began again. But while he held that over-cultivation meant the ruin of the moor, and that without long leys 'they would plough all the soil away', the improved grass on the Forest cannot be maintained in what may be termed 'Knight order' unless broken and re-sown from time to time, though it will never revert completely to the forest grass condition. Lime was essential, and Frederic Knight used large quantities, not only on arable land but also on the grass. It is said that three carters and their teams were kept on no other task than that of bringing lime up to the Forest. The turnip acreage steadily declined as the value of the rape-crop was realized, for the aptitude of this plant for the Forest soils is remarkable. On the new ground a mere skim-ploughing of the peat, well worked *and limed*, would give fine crops for several years, and the penetrative power of the tap-roots was wonderful. On the reclaimed soils heavy dressings of lime, kainit, and phosphates were used, and the rape crop came so tall and strong that 'you could catch a sheep against it'.

As regards the utilization of the crops, the hoggs, draft ewes and lambs, the product of a Shropshire cross, were fattened on the rape. As much of the seeds-ley as possible was cut for hay, and the rest was made into huge silage stacks, the grass being compressed by the wire-rope system. The ewes were wintered on the inclosures, and a large number of the lambs were sent away into the low country, round Dunster, to be

wintered. Although it is possible to farm profitably only on the Forest, the lack of land at a lower elevation for wintering young stock was a definite handicap to Frederic Knight's system.

Whilst the management of the cultivated land was directed entirely to the maintenance of the Scottish sheep, and these formed the principal object of the farming, the summer grazing of the unreclaimed tracts on the Forest by cattle was still an important feature. Stock from the lowland farms was taken in to keep, as in former periods, and Frederic Knight bought large numbers of shorthorn heifers at Bristol, and elsewhere, which were brought up to the Forest. He created a name for the quality of his down-calvers, which were disposed of at the Simonsbath autumn sale, at Bridgwater, and at other places. Some cattle were fattened in the summer on the improved land, and in winter there was usually sufficient hay and silage to keep a fair number in very good condition for finishing next summer. They were not often wintered away. Frederic Knight and his father had tried many breeds before coming back to Devons and Shorthorns, and the latter were the final choice, as it was said that the Devons were liable to dysentery, though, as a whole, Exmoor is extremely healthy for stock of all kinds.

As regards the work-horses kept, Suffolk Punches were the favourite breed. A number of these of excellent quality comprised the stud, and a few stallions were kept.

So things continued, on a well-established routine, through the 'eighties and 'nineties of evil memory amongst agriculturists, and Exmoor farming held its own as well as any other system or district. Apart from the fact that Sir Frederic Knight (he had been made a K.C.B. in 1886) had parted with the reversion to the property, and so might have felt little inducement to any further capital outlay on its development, these were not times for the intensification of farming, and the man who spent the least got the biggest return on his investment, here as everywhere else in England.

HAMPSTEAD
PUBLIC LIBRARIES

FREDERIC WINN KNIGHT
1884
Cartoon by Leslie Ward

SIMONSBATH IN 1897

Showing the shell of John Knight's mansion behind the house

SIMONSBATH HOUSE TO-DAY

Nevertheless, a certain amount of cottage building was done during this period, and minor works of improvement, but the building of the mansion which was to replace Simonsbath House was stopped and was never renewed.

Sir Frederic Knight died on the 3rd May 1897. At this time he was farming about 9,000 acres, with a stock of some 9,000 ewes and lambs, 14 farm horses, besides the cattle and few ponies. He maintained his interest in what had been the biggest task of a very busy life right up to the end, driving everywhere over the Forest in a four-wheeled dogcart when he could no longer ride. His disappointments had been many, his reverses severe, but it would be impossible to find an example, in the length and breadth of England, of courage, determination, and resource greater than that which he had displayed in his effort to complete the stupendous task, conceived and started by his father, of the reclamation of Exmoor Forest.

VIII

1898–1928. LANDLORD AND TENANT AGAIN

THE sale by Sir Frederic Knight of the reversion to his Exmoor Forest estate, following the death of his son, has been recorded already. The purchaser was Earl Fortescue, who transferred his rights to his son, Lord Ebrington, now fourth Earl Fortescue, and he entered into possession some two months after Sir Frederic Knight's death. A valuation of his live and dead farming stock, cultivations, &c., made for the executors, reached the figure of £14,400. This included some 6,500 sheep, 75 cattle, 30 ponies, 15 horses, and 4 pigs, but it must be noted that about 1,200 of the sheep belonged to Badgeworthy herding, in the parish of Brendon, which lies outside the boundary of the ancient Royal Forest, though forming part of the Knight estate.

There is no doubt that Sir Frederic Knight had retained so many of the farms in his occupation because they were necessary to his system of fatting out as many as possible of the produce of his flocks. This necessitated the growth of rape and turnips, and the periodical renewing of the pastures as already described. Only in this way could stock be got ready on Exmoor for the butcher.

Under the new ownership, much better facilities for finishing and for wintering stock were available through the proximity to the Forest of more fertile lands in Earl Fortescue's own occupation, in the more favourable climate of Castle Hill. Thus the Forest has come to be used, and more profitably, as a breeding and lying-off ground for the better lands below it. So, in its last phase, the policy has been to let off all lands for which tenants could be found, and, except as regards the great sheep-ranching enterprise, to apply to Exmoor the traditional principles of English estate management. In

succession Wintershead, the cottage adjoining Honey mead and a part of the farm (1898); Cornham, (1899); Duredon, (1901); Winstitchin, (1903); and Pinkery, (1912), were let off. Some of the herdings were given up, or curtailed, as a consequence, and Sir Frederic Knight's eleven shepherds on the Forest were gradually reduced to seven.

The social history of the tenants is interesting and peculiar, for farmers on Exmoor have become almost an hereditary class, and fully seventy-five per cent. of them began at the bottom of the ladder, or at one generation from it. With hardly any exceptions, every farmer on Exmoor to-day was born on the Forest, or worked on it for many years in the landlord's employ before taking up his holding. Thus two of the shepherds have left their herdings to become tenants; another man, who was carter both to Sir Frederic Knight and to Earl Fortescue, now occupies a considerable holding rented at £200 per annum; three brothers, now tenants of the present landlord, started life as labourers on the estate and are the sons of a man who helped to build and equip the farms they occupy. Other tenants represent the next generation, being the sons of men who started very much as those just cited have done. With one or two exceptions there has been a constant migration of tenants from the smaller farms to the larger ones. Men have made money and have retired, or have moved off the Forest to bigger or better farms; the two shepherds, mentioned above, were each of them able, after a few years, to purchase farms of their own; others move from the smaller or inferior ones into those that these men vacate; their sons, or some of the estate employees, follow these last into the occupation of the holdings they have left. Capital was naturally limited in several cases, but here the landlord has given to many a helping hand—not by lending money or stock, but by letting the house and a few acres at first, and adding field by field, as the tenant made good.

Details of one case may be given as an example, perhaps rather outstanding, of this process. A former tenant, son of a small farmer in an adjoining parish, came to Exmoor to work as a labourer, when a young man. In 1892, some time after, he was made a shepherd in charge of a herding. In 1898, he became tenant of 132 acres, forming part of a farm in hand, at a rent of £95, living in the cottage attached to the farm. Three years later, 235 acres, mostly moorland, were added to his holding, at an additional rent of £53; and, in 1903, a further 20 acres of good land was included, for an increase of £17 per annum. In 1910, another allotment of 156 acres of Forest land was given to him, for which he paid an additional rent of £39; and so, in the course of twelve years, his holding had increased from one of 132 acres, held for a rent of £95, to one of 543 acres, for which he paid £204 per annum.

So things remained with him for the next ten years. In 1920, he agreed to an increase of 10 per cent. in his rent, rejecting the landlord's offer of an arbitration in the alternative, and in the same year he applied for, and obtained, the tenancy of another Exmoor farm of 250 acres, at a rent of £107, in which he settled his son. About the year 1925, he bought a farm in the valley country to the south of Exmoor, and, in 1927, he quitted the Forest to farm his own property. The farm he gave up was then re-let at a slightly higher rent.

As with the tenants so with the management of the Forest, for Mr. F. G. Smyth-Richards, the present agent, represents the third generation of the family which has acted in this capacity, without intermission, since the year 1866.

The prosperity of the Forest farmers, continued over a number of years, is beyond question; there are no recorded cases of insolvency, and rarely even of difficulty. This position is the outcome of the type of farming and of the system of labour organization. Exmoor farms are concerned, in the main, with stock-raising. There are sundry sales of butter, cream, and

eggs in the summer, and of rabbits in the winter—in fact, these items are said to produce enough to pay for the housekeeping—but the main dependence of the farmer is on the autumn sales of store stock, both sheep and cattle, and for a long time past no branch of agriculture has been safer than this. The sheep kept are exclusively Exmoor Horn; lambing starts about Lady Day, and, after weaning, the ewes are turned on to the Forest allotment which forms a part of each holding. The ewe hoggs are wintered either on the farm or on land taken away. Wether lambs are nearly all of them sold at the Simonsbath autumn sale, or at Blackmoor Gate or other fairs held annually at various places round the Forest. None of the tenants have adopted the Cheviots: while some of them agree that they are better suited to the climatic conditions, the prejudice against 'foreigners' in the local markets is too strong.

As regards cattle, few but the Devons are seen. The cows are all spring-calvers; they run out till Christmas, when they are brought up at night, and they can run into the yard in bad weather, during the day, for hay. The bullocks are mostly out all the day-time, being taken in at night, though some of the young ones may be yarded in winter, to make dung. The quantity of feeding stuffs used is very small, and no cattle are finished. Calves are hand-reared, on skim-milk and meal, the cream being scalded or made into butter. A few of the tenants take stock at agist for the summer grazing, but the practice is by no means general.

Practically no stock is bought, neither cattle nor sheep. Contagious abortion is rare, and the sheep are exceptionally healthy. Most of the farms feed a pig or two for home consumption, but there is no production for sale.

As to cropping, the fundamental thing is still the ley, but the practice of breaking it, and re-sowing after a short rotation, seems to be dying out. Several of the tenants say it does not pay, though they admit that the improved grass cannot be maintained in the best condi-

tion without it. When tillage is still practised, the old rotation seems to hold good—that is, roots after the ley, then oats, and then rape and seeds, the seeds being left down for an indefinite period before being broken again. Basic slag works wonders on these leys, but the cost of getting it on to the Forest is almost prohibitive. Liming is still practised here and there; but to make a generalization, there are definite indications of a slowing-down of the pace of the husbandry. Prices, though remunerative, are not of an order to encourage men to take risks; the easier system of leaving things more to Nature pays; why not leave well alone? But the experience and the skill is still to be found, and a more intensive practice may develop at any time if the prophets of better prices for English sheep and cattle should be justified of their optimism.

As to the other factor in the prosperity of the Forest farmers, the system of labour organization, practically the whole of the work is done by the tenants and their families; hired labour is almost negligible. Thus there are no weekly wages cheques to be drawn, no overtime nor special rates of pay for Sunday labour, no half-holidays. Labour is working for itself all the time and trades-union conditions have no meaning. The women-folk and the children all take their turn, in fact the women work as hard as the men; two of them remained tenants of their holdings for many years, following the loss of their husbands. Some of the tenants at one time employed lads sent out by a Society, to whom they paid a few shillings a week and their board and lodging with the family. The lads earned a little extra by cutting turf for house fuel, but the urban demand created by the War has stopped this source of labour. There is no doubt that if men could be found in sufficient numbers to embark on agriculture on the basis of the family as the labour-unit, salvation for English agriculture would lie in the multiplication of 'small holdings'—farms small not necessarily by the standard of acreage but by the fact that the labour equipment is to be found

FAMILY FARMING
The Secret of Success

HAMPSTEAD
PUBLIC LIBRARIES

CHEVIOT SHEEP ON THE FOREST

complete in the farmer's kitchen. The Forest farms are large, but in respect of labour organization they compare with the holdings of 30–50 acres on the more intensively farmed lowlands of England. The day may come when there will be men enough willing to put up with the life of almost continuous labour, which the work of the 'family farm' entails, to justify an active small holdings policy. At present, the lure of the town, and the opportunity for greater remuneration at less effort available everywhere in a country so highly and generally industrialized as England, are sufficient to defeat any general attempt at the re-creation of an English peasantry.

Exmoor farmhouses are remarkable for their severity, both outside and inside, but there is a great contentment with the life on the Forest, and the loneliness does not seem to be felt. The 'wireless' aerial has made its appearance on the Forest, and, in summer, isolation is now a thing of the past, for visitors occupy all the available accommodation. The landlord has assisted in the cultivation of this new 'crop' by equipping many of the houses with that necessity of modern existence, the bathroom, and there is no doubt that this summer harvest plays an important part in the farming economy of the district.

This subject cannot be left without remarking that there has been no licensed house on the Forest for many years. The Acland Arms at Mole's Chamber (now derelict) and the Red Deer, or Gallon House, on the other side, gave up their licences through loss of trade, and the sale of beer and spirits at the hotel at Simonsbath was stopped, many years ago, by Frederic Knight, and the restriction still remains. The social advancement of the workers which is so noteworthy was attributed by the late Mr. Smyth-Richards almost entirely to this, for men accumulated the money which would have been spent. Beer is brewed in more than one of the Forest farm-houses for home consumption, under a 50*s*. licence.

Outside the tenant farmers, farming on the Forest

to-day is restricted to Earl Fortescue's sheep ranching and the summering of cattle. The Cheviot sheep and their shepherds—the former entirely, and the latter mostly, the descendants of Frederic Knight's original stock imported sixty years ago—are distributed over six herdings, practically all of them on the unimproved land. A ewe flock of close on 5,000 head is maintained, and it is said that they have preserved all their original character and type unimpaired. 'You might take them to Hawick and no one could see any difference.' About 100 rams are used, and these are all bred on the South Forest herding. Every two or three years some tups are purchased at Hawick and brought down to this herding, and the other flocks are supplied from the best of the ram lambs they leave. Thus most of the tups in use may be described as being one year from Scotland.

Lambing starts about the 1st April, and the long record kept at Castle Hill shows that this big flock, living under entirely natural conditions on unimproved land at an elevation of from 1,200 to 1,500 feet, averages about 95 per cent. Ewes and lambs run together until the September sales, when the wethers are, for the most part, trucked to Bridgwater and sold to up-country farmers. The rest are taken to Castle Hill. Ewe lambs required for the flock are also wintered there, being returned to the Forest in the following Spring, and the remainder are sold off. No lambs, either ewe or wether, are wintered on Exmoor. The ewe flock remains there throughout the year, and is never fed except in exceedingly heavy weather, when some hay is given. Cull ewes are mated with Shropshire rams, and they and their produce are got fat for the butcher on the improved pastures and rape fields of Titchcombe, which affords the best keep of all the 8,000 acres of land in hand. The size of the flock is determined by the number of sheep that can be maintained in April—the month when keeping on Exmoor, as in most places, is at its lowest worth.

A good many cattle are summered on the Forest to utilize the excess of grazing. Some 300 heifers, mostly Shorthorns, are sent up annually from Castle Hill, many of which are sold as down-calvers at the Simonsbath autumn sale, thus following Sir Frederic Knight's practice. The rest are returned to Castle Hill at the end of the season. The Forest would carry a far larger head, and it is open to farmers to send up cattle to be agisted, and upwards of 100 are grazed in this way. But it is useless to press the business to-day, as the general decline in arable cultivation in the surrounding districts has led to a reduction in the number of beasts wintered in the straw-yards, and so to a falling off in the demand for summer keep.

Ponies, once the great feature of the Forest, apart from the sheep, are practically unknown here now. Mechanical haulage in the coal mines, and the runabout car on the roads, have killed the demand for these most attractive and only indigenous animals, and they are almost unsaleable. It is said that more than a hundred ponies, of all ages, were sold off Brendon Common, in 1928, at 16*s*. per head all round, for conversion into sausage meat. Moreover, the reasons which, sixty or seventy years ago, led Sir Frederic Knight to reduce his stud and to increase his flocks, apply with even greater force to-day. A fleece and a lamb are worth far more than a pony sucker, and the Forest will produce far more of them.

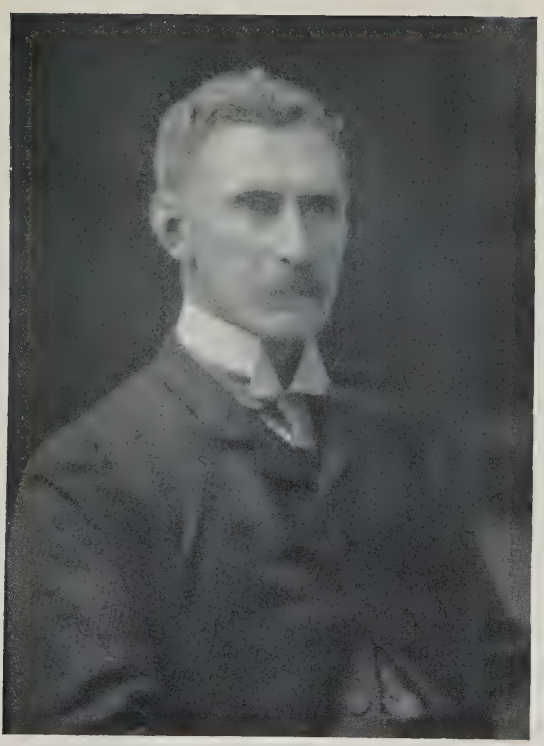
Earl Fortescue's Exmoor sheep ranch constitutes what is probably the largest, and certainly one of the most interesting, of home farms in England. In its way the enterprise is unique. Apart from this, however, the Forest to-day is a normal example of conventional estate management. The entries in the Estate Journal for the past thirty years are a record of regular maintenance and steady improvement as opportunity offered. The road past the front of Simonsbath House was diverted to its present line for greater privacy, and the telegraph was extended from Exford—both in 1898.

The hotel has been improved, new cottages built and old ones reconditioned, new woodlands planted, and several of the old plantations enlarged. A saw-mill has been equipped, and a turbine installed in the river to run it. In 1913 Pinkery Pond was emptied in the course of a search for a suspected suicide, 'and the herons for miles round had good sport in the mud'. It would have helped to drain the Chains if the pond had been left empty, but it was found to be dangerous for the stock on that part, so the vents were plugged again, and it was refilled.

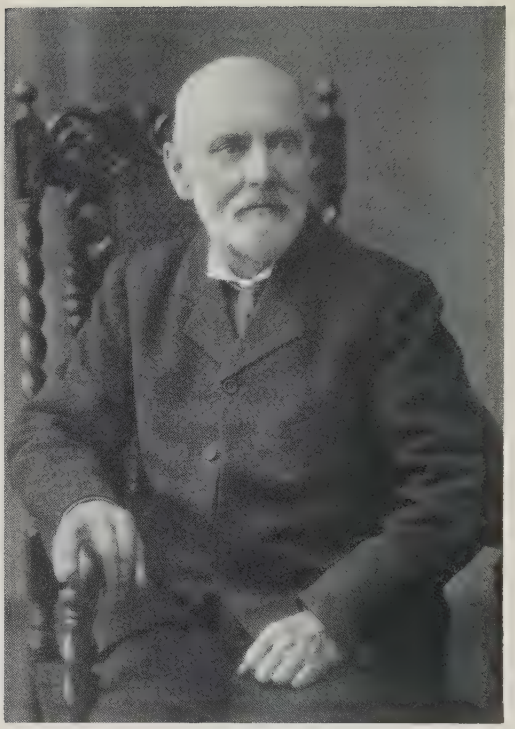
The Forest shared the general experience of the tragedy and the comedy of the Great War. Of the former, nothing need be said here; of the latter, a hundred years' experience of arable farming at the 1,200 ft. level did not suffice to stay the issue of Cultivation Orders by the County Agricultural Committee, and some 80 acres were ploughed on Winstitchin and Titchcombe. Dyer's field, at Winstitchin, did not return so much as the weight of the seed sown, but it is of interest to note that tractor ploughs appeared now for the first time on the Forest, and did good work. Against this unnecessary waste of effort may be set the plantations, formed mostly by Frederic Knight, which were now valuable; and the Government felled most of the timber in Cornham Brake, Halscombe, and Flexbarrow. Hoar Oak Tree, known to be over 200 years old and one of the boundary marks of the Forest, was blown down in December 1915.

The most notable event of recent years has been the first sale of any part of the estate collected by John Knight upon the inclosure of the Forest, in 1818. In 1927, Honeymead, Picked Stones, Winstitchin, part of Winstitchin Allotment, Red Deer, and Exe Cleeve, in all about 1,745 acres, were purchased by Sir Robert Waley-Cohen, K.B.E., but this has not resulted in any change in the general policy of the administration of the Forest, which continues here, as on the major portion, on the landlord-and-tenant principle.

HAMPSTEAD
PUBLIC LIBRARIES



EARL FORTESCUE



G. C. SMYTH-RICHARDS

In 1818, agriculture was a matter of national concern, and although at that moment the condition of peace in Europe had removed the fear of food shortage and had brought down the prices of agricultural produce from the high levels at which they had been maintained so long, the expansion of urban industry was proceeding at a rate which still required of British farmers the utmost that they could produce. After the readjustment of financial conditions and national life necessitated by the return to normal enterprise, the demands of the non-agricultural consumer once more set farming on its feet, and the industry went ahead as it had never done before. So John Knight's venture was conceived in a reasonable hope of success, whatever the ultimate results may have been.

To-day, the position has undergone a complete change —not as a result of the economic upheaval following the Great War, not from a slackening of the home consumer's demand for food, not from the incompetence of the agricultural producer, but because of the whole-hearted concentration by the State for three generations on the production of manufactured goods for export, to be paid for, in the main, by the import of farm produce. In this scheme the place of the English farmer is becoming of less and less significance. 'Why do you trouble about farming ?' asked a Lancashire man of some standing—'We need so little of it. Exports and imports are what we want, and rural England must be developed more and more as the playground of the urban industrial worker.' Is this really to be the tendency, as regards this country, of the fundamental industry of agriculture ? England's position as the most successful exploiter of the industrial markets of the old and new countries of the temperate zone has been shaken, since the War, partly by the reduction of purchasing power resulting from it, partly by the strength of nationalist feeling which it has engendered, partly by the increasing competition of other manufacturing countries. In the struggle to maintain the top-heavy industrial structure,

attention is now being given to the development of the markets of the tropical dominions of the Empire. If, by these or any other means, industrial expansion can continue, bringing with it an increase in the purchasing power of the non-agricultural consumer, the day will come when the demand for food will be reflected in price levels, and so in the intensity of agricultural production possible in this country. If it cannot, the home market will become again a matter of greater national concern, and more intensive farming will then be possible from the contrary cause, namely a lowering of the general standard of living, making profitable, once more, systems and acts of husbandry which now yield no return. Thus the opportunity to increase the productivity of agriculture on the Forest of Exmoor by the application of methods which have been proved, beyond doubt, by its past and present owners, may come again, one day, either through the increase or through the decline of the industrial development of the country.

IX

MINING

ONE of the shortest but not the least interesting chapters in the story of Exmoor reclamation relates to the few years during which attempts were made by Frederic Knight to exploit the deposits of iron ore which occur here and there upon the Forest. It was an enterprise based on high hopes, and conducted for a time with almost feverish activity. Had it succeeded, Exmoor might have become an important mineral district, owing to the nearness of the South Wales iron industry, but it came to a speedy and complete collapse.

Throughout the hill-country of North Devon and West Somerset, which forms a belt about five miles wide and thirty miles long extending from Hangman Hill, near Combe Martin, and the North Molton ridge, on the west, to the neighbourhood of Wiveliscombe, and the Stogumber and Crowcombe valley, on the east, veins (so-called) of iron ore are to be met with. The strata of this district belong exclusively to the Devonian system, and they comprise alternations of sandstones, arenaceous and argillaceous shales, calcareous beds, &c., interstratified in endless variety and exhibiting numerous changes of character over the extensive area which they occupy. Though the strata have suffered much disturbance, their contortions take a direction almost exclusively at right angles to the line of bearing, so that they preserve a remarkable degree of parallelism, and may be followed, from east to west, over an extensive range of country.

Between the divisions in these strata, casual deposits of metallic minerals, particularly of iron ore, frequently occur, especially at or near the intersection of the strata by slides or cross-joints. These deposits cannot properly be termed veins or lodes, which are faults, or fissures in the rocks, running across the line of the strata—usually at a considerable angle to the line of strike—and filled

with minerals of various kinds. Veins should continue at depth, whereas the deposits found in formations such as those of the Exmoor district are almost always shallow, and tend to pinch out or die away as they are explored in depth.

On Exmoor, and in the adjacent Brendon Hills, these deposits of iron ore were known in ancient times, and they exhibit signs of extensive working, here and there, where they happen to lie at or near the surface. The name 'Roman' applied to these old workings, however, is to be taken rather as indication of their antiquity than in the literal sense. It has been suggested that they may date back to the time when Elizabeth invited German miners to England, and the idea may derive support from the names Ison Hill, Ison Common, &c., which occur in the vicinity of the old workings south of Wheddon Cross, whence considerable quantities of iron ore have been extracted in recent times. The most extensive of the Roman mines, so-called, on Exmoor are to be seen on Burcombe, adjoining the road from Cornham Ford towards Blue Gate; they extend for some distance, and give evidence of considerable production by means of 'patching', or surface working.[1] Other old workings occur throughout this country, as at Blackland, Mole's Chamber, and Whitfield Down.

That the possibility of mining on Exmoor had occurred to John Knight is clear from his payment of £762, being 3*s*. per acre, for the mineral rights reserved to the Crown under Sir Thomas Acland's and Sir Charles Bamfylde's allotments, in the year following his acquisition of the property. As an ironmaster himself, the question would be, naturally, in his mind, and he would have been familiar with the old surface workings in various places on the Forest. 'It does not appear from the inquiries which we have made', say the Commissioners of Woods and Forests in their Third Report to Parliament, dated the 18th June 1819, 'that there is any

[1] Mr. E. T. MacDermot suggests that James Boevey, who held the Forest of Exmoor, 1653–95, may have been the 'Roman' in this case.

reason to suppose that there are mines or minerals of any value under the property in question; considering the rights of the Crown therefore in the present instance to be merely nominal, we have offered them to Mr. Knight for one year's rent of the land, which has been reported to us to be about 3*s*. per acre.'

John Knight made no attempt to exploit this acquisition, nor were the Crown rights ever conveyed to him. Mining on Exmoor during his lifetime was confined to a single venture, the object of which was to develop suppositious, but really non-existent copper ore.

The Wheal Eliza Copper Mine

The first mine to be opened in the district in modern times, antedating, by a few years, the earliest operations on the Brendon Hills, was the Wheal Eliza mine, on the Barle, between Flexbarrow and Cow Castle. On 1st March 1846, John Knight executed, at Rome, a lease of all silver, copper, lead, tin, iron, and all other ores on Honeymead Farm, then occupied by Henry Matthews, to Russell Martyn Riccard, of South Molton, gentleman, John Cock, of South Molton, builder, Richard Sleeman, of Tavistock, surgeon, and Oliver Matthews, of Molland, mining agent, for twenty-one years from the twenty-fifth day of the same month. The lease recited that these gentlemen were 'about to form a company of adventurers for working a mine intended to be called by the name of the Wheal Eliza Mine'. The negotiations for the lease had been conducted by Frederic Knight, on behalf of his father, and there is reason to believe that the mine had been worked before. 'I am much pleased with your account of the Copper Mine' —wrote John Knight to his son, in December 1845— 'and if it is what I used to consider an Iron Mine no doubt it will prove of great value. I was told 10 years ago that it was a copper mine, at bottom, but as my informer was a great Rogue, tho' a clever miner, I did not believe him.'

No dead rent was provided, but the lessees cove-

nanted to keep not fewer than six miners at work, and to pay the lessor one-fifteenth part of the value received (i.e. one shilling and fourpence in the pound) by the sale of the ore raised, the only deduction allowed before arriving at the figure to be the cost of carriage of the ore to the place of delivery. Alternatively, the lessor reserved the right to take one-fifteenth part of all the ore brought to bank.

The lease is very brief; there is no plan of Honeymead, nor are its boundaries identified in any other way, but the extent of the farm included, at this date, those known as Cloven Rocks, Picked Stones, and Winstitchin farms. Covenants by either party are few. The lessees were to build six cottages, of a size specified, so soon as they had raised two hundred tons of ore, and they covenanted not to 'kill or molest the Red Deer on the Forest' under penalty of twenty-five pounds in each case, as liquidated damages. The lease could be determined by the lessees at any time, by giving two months' notice to the lessor, and at its expiration, or whenever otherwise determined, all works, buildings, &c., above and below ground, were to pass to the lessor, without compensation to the lessees except as regards any waterwheels, which the lessor could take at a valuation, and as regards any other machinery, which the lessees could remove.

Oliver Matthews did not execute the lease, nor was any company ever formed, but the other three adventurers lost no time in getting to work. Although there was a general letting to them of all metalliferous minerals, it was copper ore that they were seeking. A shaft was sunk to a depth of 260 feet, and levels were driven from the shaft on the lodes discovered. A road was made along the Barle to Simonsbath, and a large waterwheel was erected, at the mine, for pumping purposes, together with various buildings and incidental works. No copper ore was disclosed, for the reason that there was none; an analysis of the ore made at a subsequent period in the history of the mine indicated the presence in it of less than 1 per cent. of copper.

The mine contained good iron ore, however, analysing up to 60 per cent. of metallic iron, and in 1855 Frederic Knight was anxious to get possession of it, in connexion with a scheme which he was then maturing for the development of iron-mining on Exmoor, on a large scale. He arranged, accordingly, that a nominee, a Mr. William Thomas Whyte, should approach the lessees with a view to obtaining an assignment to himself of their lease, which, by this time, they must have realized to be worthless. Whyte was an Irishman who had had considerable experience in the North of Ireland in executing contracts under the Board of Works; at this time he was acting as agent for the Ruabon Coal Company and the North Wales Coke Company, but he was employed also, from time to time, in various matters by Frederic Knight. On the 5th June, 1855, he obtained an assignment of the lease, from the three parties to it, in return for a payment of £300, which included the whole of the equipment of the mine, from the 25 ft. water-wheel and the pumping plant, down to the bedsteads, blankets, knives and forks, and other furnishings of the counting-house and bothy. Frederic Knight's cheque 'for the purchase of Wheal Eliza mineral lease, with plant and machinery', was drawn for £328 17*s.* 6*d.*, the oddment representing, presumably, the expenses of the transaction.

As an iron mine, the Wheal Eliza proved no more successful than when it was first operated for copper, though it certainly contained good iron ore. To-day it is mostly remembered as the hiding-place selected by the only Exmoor murderer, William Burgess, for the body of his little victim, an unwanted daughter. The story of the detection of the crime and the recovery of the body from the bottom of the shaft after months of search has been told by Mr. Thornton.

The Burcombe, Deer Park, and Picked Stones Iron Mines

Frederic Knight's attention had been attracted to the possibility of discovering iron ore on Exmoor by events

on the adjacent Brendon Hills. To quote his own record —'The first iron ore found in our district was about the year 1847 or '48, when Mr. Smith Tibbets drove a level under the Roman workings at Goosemoor, on Sir John Lethbridge's property, to look for copper. When the level arrived under the vein, it cut through a compact mass of spathic or sparry iron ore, which is a variety of iron ore that had never previously been used in England. Mr. Smith Tibbets sent several cargoes of this ore to the iron-masters in South Wales, who, finding after trial that it did not assimilate with their ordinary processes of iron making, and that it was not very rich in metallic iron (containing 33 to 35 per cent.), declined to purchase it at a remunerative price. Mr. Smith Tibbets, having spent more than £2,000 in driving the level, ceased his operations, but not before he had made his discovery known in scientific circles. On the establishment of the Great Exhibition in Hyde Park, in 1851, iron and iron ore were brought from all parts of the Continent, and some of it of a very superior nature. The spathic iron ore, named above, was shown as the ore from which the best qualities of iron and steel were made, and the foreign iron-masters gave it as their opinion that iron and steel of quite first-rate quality could never be made in England for want of such ore.

'Mr. Samuel Blackwell of Dudley, one of the most scientific persons in the iron trade, undertook to arrange the iron department of the Exhibition, and knowing that considerable quantities of this spathic iron had been found in the Brendon Hills as before stated, examined the mine, and in conjunction with his brother-in-law, Mr. Ebenezer Rogers, of Abercairn, in South Wales, bought the sixty years' lease of the iron ore under Sir John Trevelyan's [? Lethbridge's] Brendon Hill property, which had been granted to Mr. Smith Tibbets.

'This lease was soon afterwards transferred to the Ebbw Vale Iron Co., at a premium of £1,000 per annum during its continuance, and that Company soon afterwards took leases of the adjoining portions of the

Brendon Hills belonging to Lord Carnarvon and Sir Walter Trevelyan.

'In 1853, when I first discovered iron ore on Exmoor, the first persons whom I invited to look at it were Messrs. Blackwell and Rogers.

'These gentlemen opened, in a short time, the vein called Rogers' Vein, which they pronounced of very great value, and they told me that they thought they could make a Company to work my iron mines. Their plans were broken through by a period of severe distress in the iron trade which prevented the persons they had applied to from joining in the speculation.'

The shaft on Rogers' vein was sunk to a depth of 45 feet before work stopped. Sixty-two tons of ore were raised, and sent to Mr. Blackwell's works, at Dudley, for trial. Frederic Knight and his agent, Robert Smith, continued their search for minerals, working on the assumption that the ore deposits formed veins following the line of the strata right through the district, and thus they claimed to have identified the Brendon Hill and Combe Martin veins in their passage through Exmoor. Such identification is open to very serious question, though deposits of ore were discovered and proved, in many places, by trial workings on the surface.

By 1854, Frederic Knight had satisfied himself of the potential value of the minerals underlying his property. By means of trenches and holes and by making a few cuts into the side of the hill, the existence of deposits of ore was proved—for the most part on either side of the South Molton road, in the Deer Park and Hangley Cleeve to the south, and on Burcombe to the north. Other deposits were identified in the regions of Picked Stones and Hoar Oak Hill.

In January, 1855, he journeyed to South Wales with the object of interesting the Welsh iron-masters in his discoveries. He was recommended to get the advice of a mining engineer, and, on the introduction of the manager of the Dowlais Iron Works, the property of the Guest trustees, the services of William Llewellyn,

of Glanwern, Pontypool, a man of considerable local reputation and experience, were secured. Llewellyn arrived on Exmoor in May, and spent a week examining the various deposits and forming a judgement upon the property generally, regarded as a mining proposition.

The result was very favourable. In the month of July he embodied the conclusions to which he had come, following his examination of the ground and the analyses he had caused to be made of the ore samples, in a report to Frederic Knight, from which the following passages are extracted:

'The indications I observed in my examination of the district afford satisfactory evidences of the existence of iron ores throughout the property; but I am disposed to think they will be found to be chiefly red hematites in the North Forest and Brendon Commons. At all events, almost everything remains to be proved in those quarters, and the workable character of the veins, already discovered, has yet to be established. Not so, however, on the South Forest; for here every lode found to occur in the workings of the Brendon Hill Company seems to me to have been satisfactorily proved to be workable both as regards quality and thickness. . . .

The inspection I have been enabled to make, and the information I have acquired during the week I spent at Exmoor, has been highly satisfactory to me, and such as to give rise to the strongest conviction of the great value and importance of the iron ores contained in the property.

The proofs and indications that I observed, and verified, as far as was practicable, were very numerous, amounting to not less than twenty-six veins. Of these, a great many had been opened out so far as to afford conclusive evidence of their value; and I am fully satisfied that the trials you have now in progress will show most of those I saw to be workable, and important veins. . . .

Hangley Cleeve Veins. Commencing at the southern extremity of the property, on the South Forest, the first veins that have yet been proved are those to which the name of the Hangley Cleeve Lodes has been assigned. There are three veins here, associated together at a distance of not many yards apart; but the only one completely proved is that which may apparently be termed the master-lode, inasmuch as, at its outcrop, it is considerably larger than the others. . . . I carefully measured the thickness of the great vein, and found the dimensions, from wall to wall, fully 15 feet, the lode being composed of a remarkably rich brown hematite, having, however, the distinct spathic structure, and being unquestionably the upper extremity of a vein of that character. . . . The sample

assayed of this vein gave 60·63 per cent. of metallic iron, which exceeds the usual produce of the brown ore worked at the Brendon Hills; the specimen I have had tried from thence yielding only 52 per cent. . . .

The rest of Mr. Llewellyn's report, dealing with at least a dozen other veins, is equally enthusiastic, and he concluded it as follows:

'The veins I have enumerated, in the foregoing observations, are all included within the limits of the South Forest. It will be observed that they are unusually numerous, and several of those that have been proved are of remarkably good quality, and of such a thickness as to admit of their being very economically worked. If the resources of the South Forest were limited to the Hangley Cleeve Lode, the Double Lode, Rogers' Lode, the Roman Lode, and the two Cornham Ford veins, ranging as these do over an average distance of about four miles, there would, in my judgement, be an ample field for mining enterprise, and the tract would be sufficiently extensive, both as regards area and productive capabilities, to justify very extensive operations, and, after a fair trial of the veins, the construction of a railway, or tramway, for the conveyance of the ore to the Bristol Channel.'

With a report such as this from an experienced mineral agent, who, as receiver in Chancery for the Lethbridge estates, had been responsible for the valuation and leasing of the iron mines on the neighbouring Brendon Hills, can it be wondered if Frederic Knight concluded that he had a valuable mineral property in Exmoor, and laid his plans accordingly? On the advice of Mr. Llewellyn operations were to be restricted, in the first place, to the South Forest, or rather to that portion of Exmoor lying south of the Challacombe–Exford road. Large deposits of iron were said to exist on the North Forest and on Brendon Common, but of a lower grade than the rest and not immediately attractive. On the South Forest and the land up to the Challacombe road there was a mineral-bearing area estimated at 6,250 acres, and with Llewellyn's report in his hands Frederic Knight again visited South Wales. At this time the trustees of the Guest estate, who carried on the great Dowlais Iron Works, the largest in Britain, were George Thomas Clark and Henry Austen Bruce. Mr. Clark

was a railway engineer by profession, and a director of the Ottoman Bank. He had worked under Brunel, and had had much experience of railway construction in India. Mr. Bruce was member of Parliament for Merthyr. They had only taken control as trustees and managers at Dowlais a few months before this time, on the remarriage of Lady Charlotte Guest, the widow of Sir John Guest, Bt., who had left his wife sole trustee during her widowhood.

In October of this year (1855) Mr. Clark visited Exmoor in the company of his own mining managers, and it is clear that they formed an opinion of the mining possibilities at least as favourable as that of Llewellyn. A memorandum to Frederic Knight, written by Mr. Clark immediately after his visit, contains the following passages:

'The Dowlais agents report that the lodes of iron ore upon Mr. Knight's Exmoor estate are of quality at least equal to the best ones now in use, and in quantity sufficient for the supply of all the iron works in the kingdom for a long period. The lodes are intersected and laid open by deep valleys, and admit of being worked for many years to come without the aid of pumps, in this respect having a great advantage over the lodes on the Brendon Hills, and most of those at present worked in Ulverston and elsewhere.

'Mr. Knight, therefore, possesses an ore which he could supply in sufficient quantities at the mine mouth, of at least as good quality, and at a much cheaper rate than any ore at this time used by the Dowlais Iron Company.'

'My hopes and expectations of enormous quantities of iron ore being found on my estate were not excited to the utmost pitch until after the visit of Mr. Clark and his agents, to Exmoor, to inspect the mines', wrote Frederic Knight, when, at a later date, trouble had arisen.—'If ever I formed an exaggerated opinion of the iron lodes, it was after perusing their document.' Negotiations proceed rapidly, and after meetings between the parties at Bristol and at Dowlais, agreement as to the terms of a lease was reached.

It had been recognized from the first that one of the most important problems in the exploitation of minerals

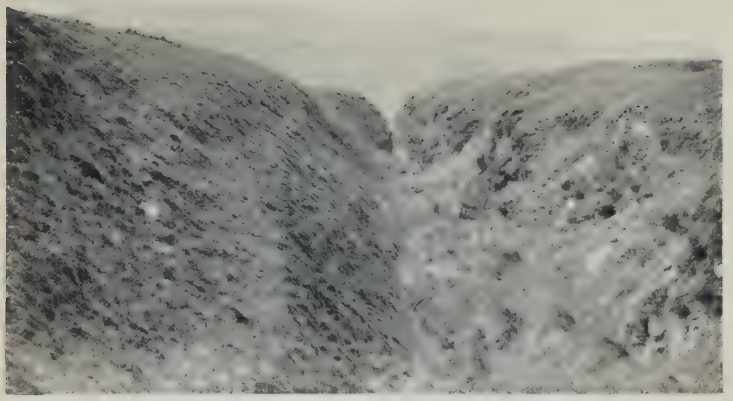
on Exmoor was the provision of transport to the coast. Llewellyn dealt with it at length in his report, discussing the alternative advantages of Lynmouth and Porlock as places for shipment, and Mr. Clark, on the occasion of his visit to Exmoor, accompanied Frederic Knight over the Commons to both these harbours, in order to form an opinion, as an experienced railway engineer, of the feasibility of making a railway from Simonsbath to one of them. At Porlock they met Colonel Blathwayt, and with him they visited the new dock which he was then constructing at Porlock Weir. It was impossible for the Guest trustees to involve the Dowlais Iron Works in the construction of a railway, but they were anxious to do all that was possible, within the terms of their trust, to facilitate the enterprise. Frederic Knight had explained his inability to finance the scheme himself, owing to the Chancery suit in which he was then involved with his brothers and sisters, and thus the agreement for the lease of the minerals was drawn to provide—in addition to the usual dead rent, and galeages (royalties) on minerals got—for the supply of the rails and all other ironwork that might be required for the construction of the railway from Simonsbath either to Lynmouth or to Porlock Weir, by the Dowlais Iron Company. Payment was to be made by deduction from the royalties that would accrue to the lessor.

The agreement for the lease was signed by Llewellyn, on behalf of the Dowlais Iron Company, on 15 December 1855. The lands included in the agreement were Great and Little Cornham, Horcombe, Burcombe, Wester Emmetts and Hangley Cleeve. A dead rent of £1,000 per annum was covenanted, and a royalty of 1*s*. per ton on all iron ore raised over and above 20,000 tons. Mining operations had already been begun, for on 30th November 1855 the first sod was cut by the Dowlais Iron Company at their lowest level on the Barle, by Cornham Ford.

Here the 'Cornham Vein' outcropped and could be worked by 'patching', and George Martin, the Dowlais

Company's mining agent, arranged with a gang of six miners, of whom Robert Comer, of Exmoor, was captain, to bring the ore to bank, at 3*s*. 6*d*. per ton. One hundred and seventy-five tons had been raised at this point, at a cost of £250, when the deposit began to peter out, and the working had to be abandoned in the following June. At the same time, arrangements were made to drive an adit, or level, afterwards called the Main Drift, from a point just below Cornham Ford, southward through the property. This work formed part of the agreement between the parties, and a glance at the accompanying plan will make the purpose clear. The land rises very steeply from the Barle southward over Burcombe Hill to the Simonsbath–South Molton road, which formed the boundary of this section of the Dowlais Company's lease, and all the veins, or lodes, of ore alleged to exist in this section, the Little Woolcombe Vein, the Cornham Vein, the Wheal Eliza Vein, the Great Quartz Vein, the Roman Vein, Llewellyn's Vein, Rogers' Vein, and the Deer Park Vein, pass through it from east to west. Thus an adit driven southward on the level, from the lowest point, would cut through the strata at right angles and would reach the boundary at a depth of some 400 feet, after proving the veins, one by one, at depth. The work was let to John Hopkins, a miner from Dowlais, and a party of five other Welsh miners, four of whom soon left and were replaced by Devon men. Operations started on Christmas Eve, 1855; three turns of men were kept at work, day and night, for two and a half years, except for a stoppage of fifteen weeks in 1857, and the level was driven 413 yards. The total distance from the line of the Barle to the line of the supposed Deer Park Lode is 1,100 yards and the work of driving the level had been estimated to take three years, but the ground proved very unfavourable, and the average progress made was only two-and-a-half yards per week. Although it never reached the boundary, and so cannot be said to have proved the property, the Main Drift passed through the ground in which the Little Wool-

HAMPSTEAD
PUBLIC LIBRARIES



A 'ROMAN' SURFACE WORKING

WHEAL ELIZA MINE AND COTTAGE

ENTRANCE TO THE MAIN DRIFT AT CORNHAM FORD

INSIDE THE MAIN DRIFT

combe, the Cornham, the Wheal Eliza, and the Great Quartz Veins ought to have been found, without disclosing the presence of any ore of the least value.

After the work had proceeded for some eighteen months, it was decided, partly to expedite matters and partly for the ventilation of the level, to sink a shaft on the Roman Lode, on the line of the Main Drift and down to the same depth. On the completion of this shaft it was intended to work north and south from it, so that operations on the Main Drift would be proceeding from three faces at the same time. The sinking occupied nearly two years; pumping was necessary to keep it clear of water until the Main Drift should be joined, when this would drain it, and a 20-ft. water-wheel was erected at Cornham Ford (by the existing foot-bridge) to provide the power for an 8-in. pump. The whole of the works involved represented an expenditure of nearly £1,000, and no trace of ore was met with. Operations were abandoned in May, 1858, when the shaft was about 150 feet deep, and when another three or four feet sinking would have brought it to the level of the Main Drift.

The advice of the agents of the Dowlais Company, Messrs. Evans & Martin, was to restrict operations to the Main Drift until the property had been proved. This was unsatisfactory to Frederic Knight, who thought that the position justified a less cautious policy. In January, 1855, he wrote to Mr. Clark, from Wolverley:

'*In my opinion* you are doing nothing on Exmoor. I will endeavour to explain to you what *I think* ought to be done, but Evans seems to me to be determined to stick to his old plan of driving one level at the lowest point, and leaving the rest alone, or at best patching a little on the surface. . . . Now, if you only continue your present plan you will not touch any of those which we suppose to be the larger veins for two years.

'Now I believe that obstinacy is an indispensable ingredient in the character of a great man, and I believe John Evans to enjoy a full share of it, combined with many other good and great qualities. Now, John Evans has unfortunately decided from the first that Level BC [the Main Drift] shall be driven, and no other one. In short, he has decided to put off any inspection of the large lodes for 2 or per-

haps 3 years. When it is considered that the celebrated *Goosemoor Lode*, in the Brendon Hills, was cut by a level only 90 feet below the surface, and proved to be 20 feet wide, which lode we believe to be identical with *Lode AC*, it does not seem reasonable to let it lie for years . . .

'How to endeavour to overthrow the decision of the great man (for whom, and for whose opinions in all other respects, I entertain a high esteem) I know not.

'I know that I dare not say another word to him on the subject. If you and Bruce were to go to Exmoor with Martin and inspect the ground personally, much might be hoped for and perhaps effected.'

A fortnight later Mr. Clark replied from Dowlais:

'I have run down here for a day or two, determined to do something to restore our waning character in your eyes, and to relieve us from that laudable conjugal indignation which I am perfectly sure Mrs. Knight must by this time begin to feel towards Bruce and myself.

'Bruce and I yesterday saw Martin and Evans, and having made our suggestions, and insisted on certain points, we met again this morning and sanctioned certain steps.

'Martin leaves for Exmoor in a few days, and he takes with him our agent from the Forest of Dean, whom we propose to fix permanently at Exmoor, in consideration of the large expenditure we are about to make there; a large cargoe of trams, plates, barrows, and tools will be sent over at once.

'Martin will consult with Smith, whose conduct seems to have been very judicious, and will take steps, by patching and opening lodes at the ends, to bring upon the banks as quickly as possible a large quantity of ore, say 10 or 12,000 tons.

'Meanwhile we are refusing new and reduced offers of ores from Whitehaven, in the hope and expectation that the next three months' operations would justify us in looking to Exmoor for our sole supply. We have now either here or contracted for about 37,000 tons, so we shall long before the close of the year want more, and this, by some means or other, we propose to get from Exmoor.

'All this ought to, and I have no doubt will, satisfy you that we are in earnest. . . . Martin will arrange to employ a large force, I hope at least 100 men; and I have undertaken to suggest to you the wisdom of letting Smith assist in lodging them as near as possible to the workings.

'When the new agent is installed, Bruce and I propose to take advantage of the first fine week to go with you to Exmoor to meet a contractor, and to go into the question of the railway in good earnest. I am very anxious that Bruce should see with his own eyes the two ports, and that our collective wisdom, advised by the practical experience of a contractor, should be brought to bear upon the whole question.'

From this letter it is evident that the Dowlais Iron Company had expectations of an almost immediate supply of very large quantities of iron ore from Exmoor, and that the construction of the railway either to Lynmouth or to Porlock was a pressing matter.

Following on the decisions taken as indicated in this letter, an active development programme was initiated. John White, the Dowlais Company's agent from the Forest of Dean, arrived on Exmoor on the 2nd February 1856, and immediately a drift called Comer's Level was commenced, at the point numbered 9 on the plan, with a view to striking Rogers' Vein. This level was driven about one hundred and fifty yards, passing through the ground which should have held the vein without any indication of ore. The expenditure on these works amounted to £236, and they were abandoned as useless in the month of December following.

In March of the same year two other operations were begun. At the point numbered 8 on the plan a drift was begun for the purpose of cutting Llewellyn's Lode, and at a point 83 yards from the mouth a vein, from three to four feet in thickness, was encountered. Forty tons of ore were obtained, but it was too much mixed with quartz to be of any value, and workings on the vein, east and west, showed no improvement. The drift was continued to a total distance of 212 yards, when, after an expenditure of £450 and no other vein found, it was abandoned. Simultaneously with this work, steps were taken for getting ore from the Hangley Cleeve Vein. This was one of the places where old workings were evident. Operations were begun by patching, or open work, and to drain the vein a drift from the point numbered 10 on the plan was begun. The vein was followed westward, where it proved to be six feet thick, but eastward it quickly nipped out. The surface indications on this lode were of a very favourable character, but when the drift struck the vein at a depth of 40 feet the indications were so much less favourable as to satisfy the Dowlais agents that it was only superficial, and so

irregular as not to be worth working. Operations were abandoned in August 1857, the total quantity of ore brought to bank having been about 1,200 tons and the total expenditure about £700.

Following the commencement of work at Hangley Cleeve, a fourth drift was begun, at the point numbered 7 on the plan, for the purpose of proving the Roman Vein. Upon this vein there was evidence of extensive old workings, and the indications promised a considerable yield of ore. The vein was struck by the drift and was followed, east and west, for a considerable distance, until the ore became so thin that further work had to be abandoned. This was in May 1858, by which time about 640 tons of ore had been brought to bank from these works, at a cost of about £800.

Nor did this exhaust the steps taken by the Company to explore their property. In December 1856, twelve months after the first beginning of mining operations by Cornham Ford, another level was begun, called the Platform Level, at the point numbered 5 on the plan. In the previous month of June, John White had been succeeded by Henry Scale as local superintendent on Exmoor, and it was at his instance that this level was driven, to get ore from a vein, not previously mentioned, of which he thought there were sufficient surface indications. A sum of £30 was spent on this level, but no ore was disclosed.

At various other times small openings were made, here and there, on the line of supposed veins, without disclosing any ore worth working.

At the end of two-and-a-half years' active exploration, then, the position was that after driving a deep level through nearly one-half of the property, and several shallower levels to prove particular veins; after patching, here and there, where the surface indications seemed favourable; after sinking a shaft one hundred and fifty feet deep, no considerable body of iron ore had been encountered at any point. In the meantime, however, the hopes of the parties, as indicated in the letter of

January, 1856, from Mr. Clark quoted above, continued to run high, and the most cordial relations were maintained. In July 1856, Mr. Clark wrote: 'We are in the heart of Llewellyn's Lode and Scale is in raptures at the general progress. Why, when you make your transit from Worcestershire to Linton, cannot you pause here?'

In August 1856, 400 tons of ore were transported to Merthyr Tydvil for trial in a blast furnace. 'We shall get it here for about £1 per ton', wrote Mr. Clark. 'Are you not coming here to see your ore smelted and will you persuade your fairer moiety and Master Fred into these dusty regions? We will find some Welsh attornies to meet her, and you shall recite to them Templer's epigram.'[1]

And in the following month he wrote again—'We are doing better than ever at Exmoor . . . We are dabbling in Bessemer's process, and have rolled two 19 foot rails. I want to try it with your ore. Bessemer comes here this week; Exmoor ore and Bessemer's process . . . My wife joins in kind regards to Mrs. Knight.'

In November of the same year Mr. Clark wrote concerning the railway, that they would be ready for it in the following spring. 'Patience', he added, 'is my Goddess, to whom I am all the more zealously obedient, as I am often an unfaithful worshipper.' On the same point he wrote again a month later. 'My reports from Exmoor are excellent. The time is fast approaching when it will be prudent to commence the railway.'

In January, 1857, the Dowlais Company was requiring upwards of 1,500 tons of iron ore weekly. Messrs. Bruce and Clark visited Exmoor in May 1857, and the latter wrote to Mr. Knight that 'all looks as well as we could fairly expect'.

As may be supposed, one of the most pressing needs in connexion with the development of the iron mines was the provision of housing for the miners. At first they had to lodge at a distance, and persons still living

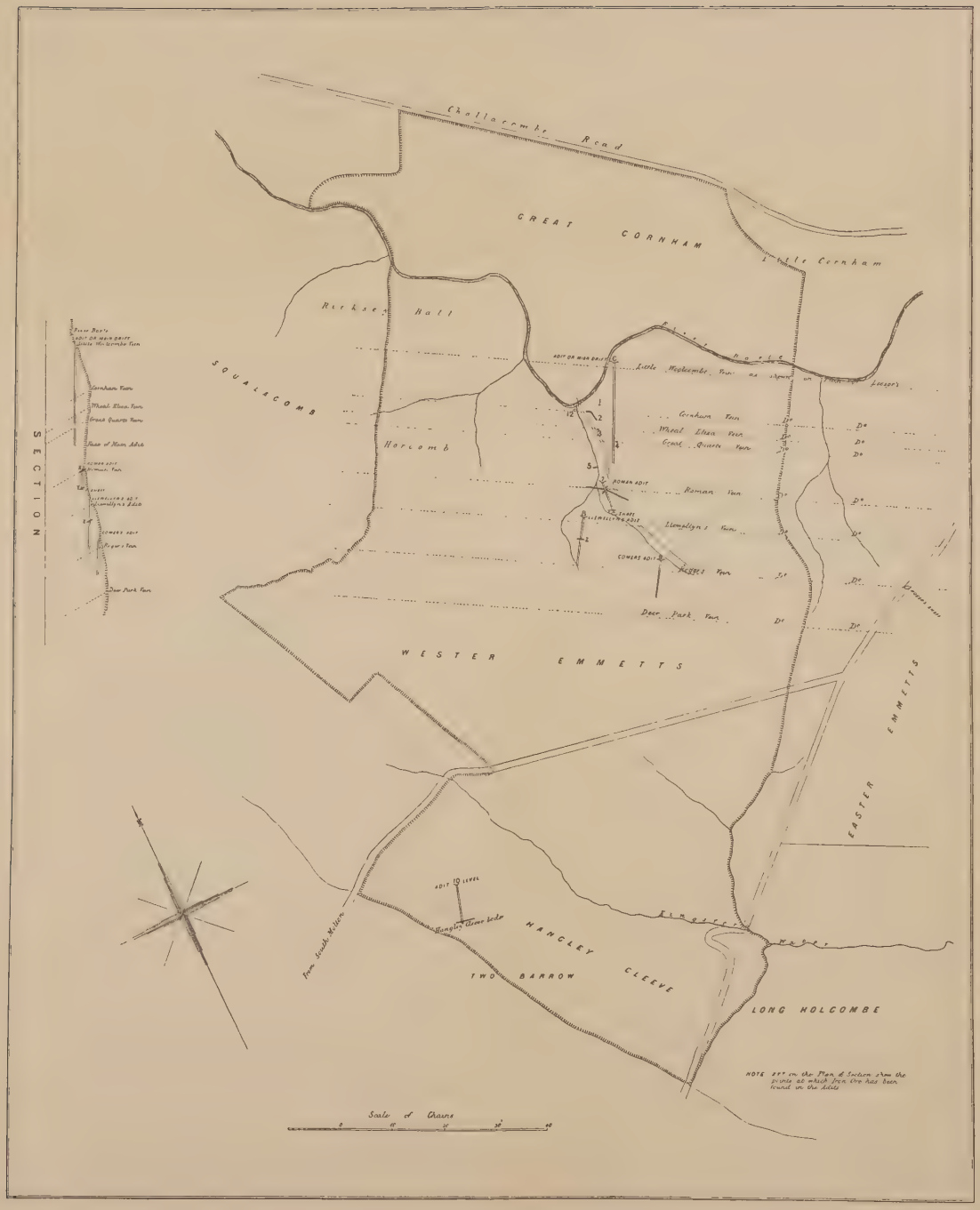
[1] George Templer, of Stover, near Newton Abbot, formerly master of the South Devon Hounds. 'Scholar and sportsman, poet and wit.'

can remember the time when every cottage in Simonsbath had its quota of lodgers. The agreement was that Frederic Knight should build the houses, and that the Dowlais Company should rent them. 'Let me have a rough plan', he wrote, 'of what you consider a proper and sufficient cottage for miners. I do not wish to allow any nasty holes to be built.' And Mr. Clark replied that in Aberdare a good cottage, one in a row, should not cost more than £70. He offered to pay a rent of £6 per annum on each cottage erected, for five years, with the stipulation that the cottages must be placed upon the Company's land and built according to their design.

Frederic Knight was unable to find a builder to erect cottages on Exmoor at Aberdare prices, and, in spite of his objection to housing people in 'nasty holes', he proposed a cheaper plan, to which Mr. Clark most reluctantly agreed on the score of economy. 'The design', he wrote, 'offends morally and physically against the fundamental rules of cottage building. The two house doors are under one shed—*ergo*, the women will quarrel. The lodgers go through the two rooms, sitting and kitchen, and possibly through a bedroom to reach their own, thus destroying all privacy, and a miner's lodger is a rough fellow. There is a gutter along the main wall, which, do what you will, will leak.'

How many cottages were built is not certain. The ruins of a row of six at Cornham Ford still remain, and if they enjoyed the advantage of being close to the scene of operations they were certainly devoid of every other amenity of life. Robert Smith has described one pair of cottages and a mine-office which were erected for the Dowlais Company at this time, in an article contributed to the *Journal* of the Bath and West of England Society.

The housing question was still acute in the latter part of 1857. 'Scale writes to me in the strongest terms about houses. Now, all hangs upon this, for if we do not push on faster and open more ground, we shall not have data



PLAN AND SECTION OF THE DOWLAIS IRON COMPANY'S MINING OPERATIONS ON BURCOMBE AND HANGLEY CLEEVE, 1855–58

PUBLIC LIBRARY

to start the railway; and if we suffer our agreement with Blathwayt to lapse we shall be in a pickle.

'I assure you the settlement of this question is one of days. It presses hard upon us all, and upon no one heavier than upon you, which is right, since you will derive considerable profit from it, both in direct rent and far more in the sale of produce.

'I think when Scale pours a broadside into me, as he does pretty often about cottages, I shall step aside and direct it against you.' Thus wrote Mr. Clark in October 1857, and this is the last reference in the still existing correspondence to the question of house accommodation, so far as concerns the Dowlais Iron Company. Some cottages were erected, and probably the doubts which shortly afterwards assailed the minds of the Guest Trustees about the possibility of getting ore in payable quantities from Exmoor disposed of the question as a matter of urgency.

It is now necessary to see what developments had been taking place with regard to mining on other parts of the Forest. Convinced of the value of the ore deposits, Frederic Knight had bought up, some time before, the remainder of the lease of the Wheal Eliza mine and the minerals under Honeymead Farm (see p. 117), and in August 1855 he had paid the Office of Woods and Forests for a conveyance of the minerals which his father had bought from the Crown in 1819. Other people besides the Guest trustees had been interested in the prospect of discoveries of iron ore in quantity on Exmoor, granted that the transport problem could be solved. At this time the Merthyr Tydvil iron-masters drew their supplies from many places, most of them situated at much greater distances than the West Somerset coast. One district from which large supplies were drawn was that of Ulverston, in Lancashire, where mines were operated by the firm of Messrs. Schneider & Hannay.[1]

[1] Henry William Schneider, Member of Parliament for Norwich City, 1857–60 (in which year his election was declared void for corrupt practices), and Robert Hannay, of Ulverston.

They were already contractors for large deliveries of Ulverston ore to the Dowlais Iron Company, and if the Exmoor proposition was likely to materialize they were anxious to be concerned in it, not only as a potential source of cheap ore, but also so that they might control the competition which would arise.

On 3rd April 1857, after due investigation, Messrs. Schneider & Hannay entered into an agreement for a lease of a large part of the area not already included in the Dowlais Company's sett. The area included the whole of the tract north of the Dowlais Company's boundary, where the Hoar Oak Veins were supposed to run, and the whole of the Deer Park portion of the South Forest, extending from Wintershead to Winstitchin. Most of the lodes in the southern portion of Burcombe continued eastward through the Simonsbath–South Molton road into the Deer Park, and at the eastern extremity of the sett there was the Wheal Eliza mine, already equipped, which gave evidence of producing considerable quantities of iron ore.

Frederic Knight was fully alive to the danger of letting so large a part of his supposed mineral wealth to a company already actively engaged in the development of properties less favourably placed for the supply of ore to South Wales. By the payment of a comparatively small sum by way of dead, or sleeping, rent, it might be possible for them to hang up the property indefinitely, and greatly to his prejudice, while they continued to exploit their other mines. He took steps, accordingly, to secure that the area leased to them should be fairly worked, and there seems no reason to doubt that Messrs. Schneider & Hannay entered into possession with the full intention of proving the property and of extracting any ore that might exist in payable quantities. As proof of this, it is recorded that they had offered to find £7,000 towards the cost of the projected railway to the coast, though there was no agreement with them upon the subject. Further, they contracted to pay a dead rent of no less than £2,000 per annum.

They, too, were under contract to prove the property by driving an adit through it from the lowest level, and by sinking shafts upon the lodes at the top of the Deer Park, within a year. They decided to make a start with the shaft sinking; a pumping engine was installed near Blue Gate, and shafts were sunk upon the Top Deer Park Lode and the Double Lode; the shaft begun in 1853 by Mr. Ebenezer Rogers on Rogers' Lode was re-opened, at the same time, and deepened. (See plan.) Shortly after, an adit was begun in the valley, with the object of proving these veins at depth, and the old Wheal Eliza mine on the Barle, below Winstitchin, was refitted. 'The Druid', who visited Exmoor in 1860, notes that in riding from the South Forest to Honeymead he crossed the brook (the Barle) 'in the neighbourhood of an iron mine, whose water-wheel was lazily resting till the railway era sets in'. Rogers' Lode seems to have been the most promising; the shaft sunk upon it was continued to a depth of ninety-six feet, and about 800 tons of ore were raised.

About the time of the lease to Messrs. Schneider & Hannay, Frederic Knight completed his scheme for the development of the Exmoor minerals by letting the remainder of the property which he had prospected, and upon which William Llewellyn had reported so favourably, comprising mainly the region round Picked Stones, to the east of the Ulverston Company's boundary, and Exe Cleeve, to Anthony Hill, of the Plymouth Iron Company, Merthyr Tydvil, Glamorgan. The agreement was dated 14th January 1857; work was begun forthwith, a shaft was sunk upon the Picked Stones lode to a depth of sixty-five feet, and a level was driven westward upon the lode. East of the shaft an adit level was also begun, and a further shaft and an adit were driven in Exe Cleeve between Red Deer and the river. Mr. Hill spent less money than either of the other lessees, and it is doubtful if he entertained a high opinion of the property. He had other interests in iron mining, in the North of England; in a letter to Mr. Clark, Frederic Knight

makes the imputation that both Hill and Schneider were more concerned to stop mining on Exmoor than to develop it. And Mr. Clark wrote that 'Scale has little faith in Schneider and thinks him trifling; certainly he and Hill take it very easy', though it is only fair to say that he added—'Hill, however, speaks highly of the taking'. In March 1858, when the Dowlais Company discharged Henry Scale, their Exmoor superintendent, Mr. Hill engaged him, although he must have been aware of the reasons for his dismissal. Scale lived at Honeymead. He seems to have been a man of enthusiastic temperament who at first impressed but soon disappointed his employers. 'Scale is active and popular', wrote Frederic Knight at one time; and later—'He is the greatest *liar* I ever met with'. And thus Mr. Clark: 'He has conducted himself with great energy and great prudence, and I am thoroughly satisfied with him', and within two months—'his reports are so variable, and his opinions so fluctuating, that I have little confidence in what he reports'. Three months later he was dismissed and joined Mr. Hill.

Scale had previously approached Mr. Schneider, unsuccessfully, with a view to getting the management of his mines. Amongst other enterprises, he built and operated a shop at Simonsbath, (towards the cost of which the Dowlais Company had, ultimately, to find £103), Frederic Knight stipulating 'that the shopman should live on Exmoor, and that the business should not be placed in the hands of a South Molton or Barnstaple tradesman, who would suck the money out of the property; further, that provisions should be sold at the same rates as the South Molton shops'. The shop was kept by Giffard, the innkeeper at Simonsbath, who paid Scale £10 a year for it. He was a deeply religious man: 'he evinces strong signs of going to church after the approaching consecration' (1857) wrote Frederic Knight; and the Rev. W. H. Thornton describes a strange scene at the deathbed of one of Scale's daughters, when he anointed the girl with oil and called upon her to rise up

and walk. Mr. Thornton says that he represented the Crawshays, of Merthyr Tydvil; but though Frederic Knight had tried to interest Robert Crawshay in the Exmoor minerals, his firm had not responded, unless, in some way, it was standing in with Anthony Hill.

Scale had always been pressing for more housing on Exmoor for the Dowlais miners. On joining Mr. Hill, the first question was that of accommodation for the men, and some cowsheds at Winstitchin and Picked Stones were converted into cottages from his plans. They contained a living-room and two bedrooms—one lighted only from the roof—all on the ground floor, and they reverted to their original purpose when the mining operations were abandoned.

Thus, within a few months of the turning of the first sod, by Cornham Ford, in November 1855, the whole of the area upon which Mr. Knight and his agent, Robert Smith, had prospected so successfully, as it appeared, was in the course of active development—the Dowlais Iron Company on Burcombe and Hangley Cleeve, the Ulverston Company in the Deer Park, and the Plymouth Iron Company at Picked Stones and Exe Cleeve—but before the first year was three parts spent there were indications of the disappointment and failure in which the enterprise was so soon to end. The trouble began with Mr. Schneider's operations. In August 1856, Frederic Knight wrote to Mr. Clark: 'Schneider has been at Exmoor and discharged his two agents; the principal one, finding that there were many reasons for not living on Exmoor, established himself, with a brace of doxies, at South Molton, and drove them all over the country in flies—always on business.

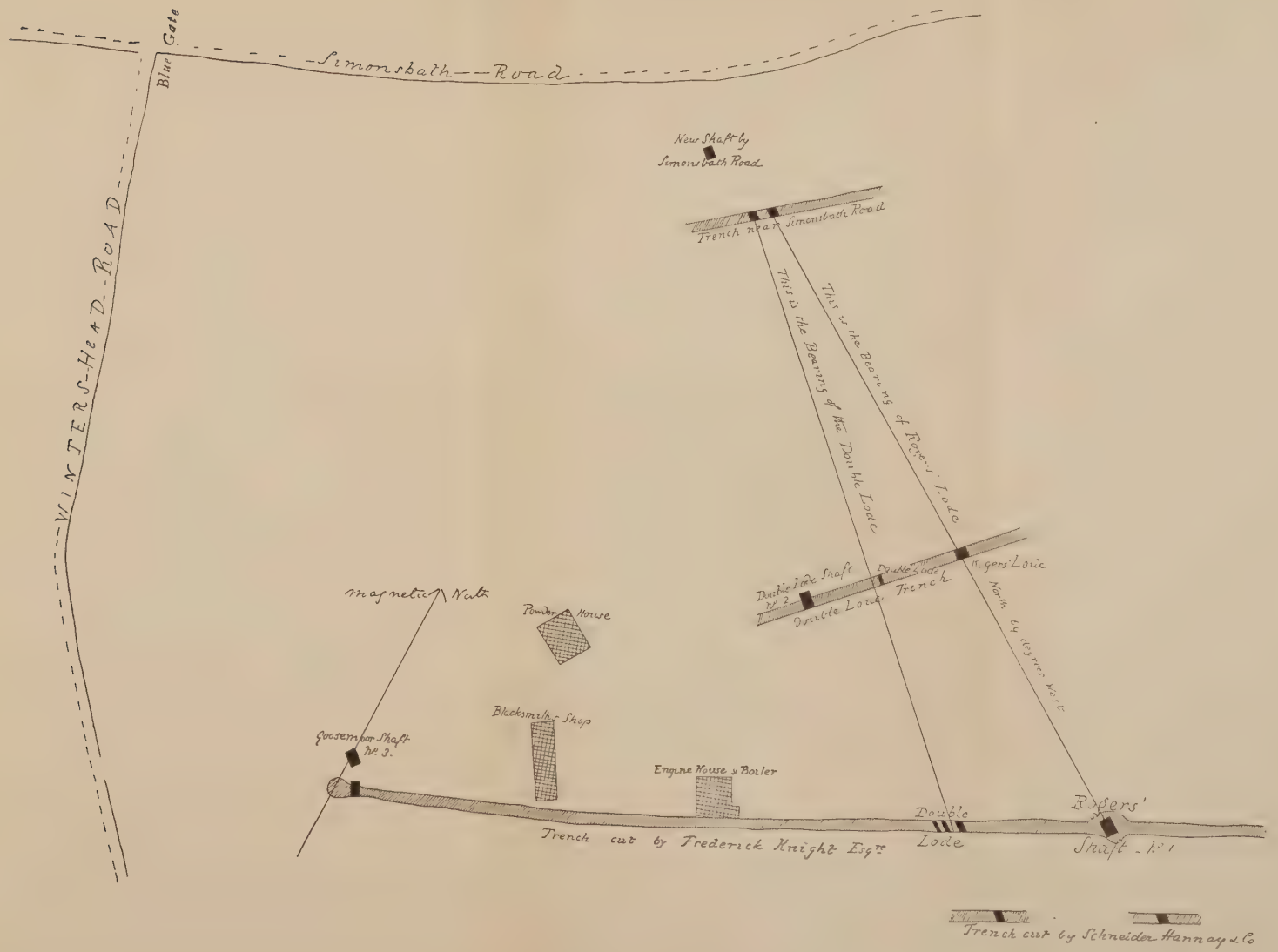
'Many men have been employed digging holes and puddling about, but next to nothing has been done, although they have more men at work than you, and have, I hear, spent nearly the same amount of money. The agents have been abusing the place and us all; indeed, before Schneider came down and discharged

them, my wise men had strong suspicion that there was no wish to find the iron at all.'

Mr. Schneider's agreement was for five years, but he could withdraw at the end of twelve months if certain conditions had been fulfilled. By November 1856, he had formed a bad opinion of the value of the enterprise, and as most of the veins of ore in the Deer Park traversed the Dowlais Company's taking also, his attitude seems to have been to employ the minimum of staff possible under his agreement (twenty men) and to let the Dowlais people prove the property. Mining difficulties, too, were greater than had been anticipated, and the depth to which the shafts on the Deer Park had to be sunk before a level could be driven to the Barle (400 feet) had not been calculated, and was twice as much as that which he had estimated. Certainly he told Frederic Knight that he did not intend to work on the Hoar Oak veins for fear that this should lead other people to seek for and find them on other properties nearer to the coast, and very soon he and his partner came to the conclusion that there was no ore on Exmoor capable of being worked with profit. In December he gave notice of his intention to withdraw at the end of his first year, and work on his holding was abandoned early in 1857.

Frederic Knight felt there had been no serious attempt by Messrs. Schneider & Hannay to carry out the terms of their agreement, and after correspondence upon the point he commenced a Chancery suit against them in May, 1857. Thereupon, Mr. Schneider approached the Dowlais Iron Company, who were old customers of his for his Ulverston ore, with a view to inducing them to throw up their tenancy also. They, however, had just had a fresh report upon Exmoor from their agent, William Menelaus, which was hopeful to their enterprise, and no concerted action resulted. The case came on at the end of the year, judgement being given for Frederic Knight for specific performance of the agreement. Messrs. Schneider & Hannay, however, were so

Capt. Phillips' Ground Plan of Messrs. Schneider & Co.
Works on the Deer Park



HAMPSTEAD
PUBLIC LIBRARY

convinced, 'as well by our own experience and observation, and those of our own agents, as also by the opinion of mining engineers and surveyors of high science and great experience, whom we consulted in consequence of the litigation, that to proceed with mining operations on Exmoor would only involve a waste of time and money, that we determined upon a compromise with the Plaintiff, and we agreed to pay him a very considerable sum to be relieved from our engagement'. The amount received by Frederic Knight as consideration for the surrender of their lease was £10,000.

As mentioned above, the Dowlais people were not discouraged by Mr. Schneider's adverse opinion of the possibilities of Exmoor as a mining proposition; in fact, when it was apparent that his firm did not intend to proceed with the development of the property, and long before the hearing of the action against him, they made tentative proposals for taking over his tract, but these came to nothing. The long period of prosperity in South Wales was about to come to a sudden end, and the autumn and winter of 1857–8 was a difficult time for English iron-masters. Much of their market was provided by the great industrial development in America during the previous decade, and the over-speculation and unsound and even dishonest finance which accompanied it brought about a crisis which reacted severely upon the English manufacturers concerned. 'The year 1857', Woodrow Wilson has recorded of America, 'was a year of very serious commercial depression, paying the penalty for years of confident and adventurous speculation. For ten years, since 1846, the country had felt the exhilaration and excitement of a rapid business expansion, which the discovery of gold in California had greatly quickened. . . . Money was quickly enough invested, but was very slow to yield an increase. Enterprise after enterprise proved a dead loss. . . . Railways were built where there were neither towns nor farms to support them, sometimes on open reaches of the country, which the plough had never touched. . . . The bubbles

of fatuous enterprise were pricked and a crisis of wholesale loss, panic, and depression occurred in spite of every token of trade and profit to come.'

The Dowlais Iron Company suffered, in common with others, from the loss of their markets and difficulty in collecting payments due. 'You will not be surprised', wrote Mr. Clark in November 1857, 'to learn that the pressure from America has affected the iron trade, both in Staffordshire and here, very seriously, and, indeed, so much so, that some works are closed, others doing very little indeed, and we ourselves entering upon half work, and in every way cutting down our expenditure even in very minute matters. I mention this that you may know to what cause to attribute the directions which I am about to send to Mr. Scale, to stop our works for the present.' There was a further letter from him, in the month following, which may be quoted as throwing additional light upon the industrial situation in South Wales, precipitated by the financial collapse in the United States. 'We, and indeed all our brethren, are much in the condition of sailors in a gale who are throwing overboard everything, to weather out the danger. We have reduced wages 20 to 25 per cent., dismissed many more, and are working more upon half time. The only symptom of a better state of things is that we have got a rail order by which we shall only lose something under £1 per ton! However, if we are to lose it is better to do so by means which will enable us to employ our men. Still we ought not to complain—bad debts we have none, our losses by the failure of other houses are very trifling and we have no very great quantity of iron locked up. Rumour says that the Baileys have lost £400,000 by American dealings, that the Ebbw Vale have been driven to get a credit for £200,000 at the Bank, and that Crawshay has lost—for the present at least—£150,000 in Saunderson's house, besides what he may have locked up in America. In Aberdare and the adjacent valleys the colliers are out and the military, I hear, called in. Our men, however, shew the best spirit. They read

the better class of newspapers, *Times*, etc., in the reading room and they see that the masters are also suffering; poor fellows, should cold weather come or prices of provisions rise I fear the pressure will be too great. However, it is a great comfort that they have no single political grievance. Further representative reform and ballot are not at present very much cared about, and our Chartists at Merthyr have behaved extremely well at the recent meetings.'

Work on Exmoor was stopped for fifteen weeks. The period coincided with the hearing of the action against Mr. Schneider, who did not fail to attempt to make capital for his case out of the circumstance, and Frederic Knight records that the stoppage at this particular moment was a heavy blow to him. As a precautionary measure, too, though only as such, the Dowlais trustees gave him twelve months' notice, from 1st January 1858, to terminate their agreement for a lease of the mines on Exmoor.

Work on the mines began again in March 1858, Henry Scale having been replaced in the meantime by William Dunstan as the Dowlais Company's agent. He was a Cornish mine-captain who had been in charge, at one time, of the Wheal Eliza mine, and who had sunk the first shaft on the Deer Park, in 1854, for Mr. Ebenezer Rogers. Later, he was employed by him in getting iron ore from the North Devon Iron Mines, at Combe Martin, which petered out about this time. That the trustees, however, were now beginning to have serious misgivings about their mining prospects is evident from their correspondence at this time. In March, 1858, Frederic Knight had written from Wolverley to Mr. Bruce: 'If the proceedings in Schneider's case lead to his giving up the property, I shall be only too glad to increase the Dowlais Company's taking on the most favourable terms to them. Mr. Hill is also asking for an extension.' And two days later Mr. Bruce replied: 'I do most earnestly hope (both for our own sakes and for yours) that the prospects of the Exmoor mines will justify

us in extending our takings. We have spent the sum of £6,000 (I think), and are, as you may suppose, much perplexed between our desire, on the one hand, to justify the prudence of the outlay, and our fear, on the other, of increasing it without an adequate return. I hope that Clark will now resume operations vigorously. I keep my expectations in suspense; but I confess that hope of such large discoveries as will justify the expense of a railway is not so strong as it was.

'Most sorry am I to say anything discouraging to you, but it is better on all accounts that you should understand our view of the case. You may still be right, and next to yourself, none are so interested as we are in hoping so.'

The work which proceeded throughout the spring and summer of 1858 was productive of no better results than that which had gone before. In May, the Dowlais Trustees caused an independent report upon the property to be made by Stephen Eddy and John Taylor, as a result of which all work was stopped on 8th June, and although, as things turned out, this date was to mark the termination of the company's operations on Exmoor, the Trustees were still willing, at that time, to go forward if they could obtain certain modifications of the terms of their agreement. They stated their position and proposals in a letter to Frederic Knight which follows here in full, as it seems to be a fair and complete summary both of their actions and of their point of view:

Dowlais House, Merthyr Tydvil,
26th June 1858.

'My dear Mr. Knight,—I write to bring formally under your attention a matter which has already been the subject of conversation between us, and which, from the magnitude of the interest involved, deserves your serious, and for other reasons I think, your favourable consideration.

'When, above two years ago, we entered into the agreement with you under which we have worked at Exmoor, we covenanted, among other things, to drive a certain drift a specified distance, to pay a certain sleeping rent, and in the event of a railway being made, to supply, under certain conditions, the rails.

'These covenants were entered into by Mr. Bruce and myself with the firm belief, as stated by you and your advisers, and con-

firmed by our advisers, that the ore was present in large quantities, and that we should speedily find ourselves in a position to need a railway, and to find the making one a profitable investment. You pressed the matter strongly upon us, and we entered at once and conditionally into the undertaking, and by our example led, as is well known, others to make similar ventures.

'In proof of the good faith with which we entered upon our engagements, I may remind you that we did not confine ourselves to the letter of our agreement, but we opened the ground in various places, and in most respects in accordance with your opinion and advice, and, indeed, took every step that we could take to prove the ground rapidly and effectually; in fact, we have spent upwards of £6,000 in the works, and have only removed about £950 worth of ore.

'We have built cottages, and we joined with you in applications to landowners for the construction of a railway.

'For some months past we have been arriving at the conclusion that the prospect of ore held out to us is not justified by the facts; the lodes opened by us on the surface have altogether failed to produce any considerable supply of ore, as have those connected with the drifts which we have driven parallel to, though at a higher level than, our Deep Drift; and the lode which was always expected to prove highly productive, and which we hoped on the Deep Drift to reach, has turned out a complete failure.

'We think, therefore, that it is useless expenditure to make us pursue the Deep Drift further into ground which we have in great measure proved by our parallel workings at a higher level.

'We have thus, after considerable outlay and great experience, arrived at the belief that the ore is not in the ground in quantities to be worked to a profit, and certainly we have failed, notwithstanding our exertions to realize the expectations held out to us when we entered upon our agreement.

'Having thus done our utmost to prove the Moor, we think we have a strong claim upon your forbearance; under such circumstances, it is usual with coalowners to waive their claims for dead rent until the tenant has had a reasonable time to prove the ground.

'This, therefore, we request at your hands; and we wish also, before converting the agreement into a lease, to modify it in various respects, many of which will be advantageous to both parties.

'With respect to the mode of proceeding, we have also a proposal to make to you: we wish to be permitted to leave the Deep Drift at once, or at the utmost when it shall have reached the Roman Lode, and in substitution for this to lay open the Roman and other lodes by working along their course, so as to obtain at once, if possible, a supply of ore.

'By this means (always supposing the ore to be present) the character of the Moor will be raised considerably, and you will probably obtain tenants for the portion now unlet; whereas, if we

are forced by you to proceed with the Deep Drift, through ground which we think likely to be very unproductive, our position will assuredly deter any other person from entering upon a speculation which we shall have found so utterly unproductive.

'I feel sure, that if you look back at the liberal manner in which Mr. Bruce and I have entered into and forwarded your views, and have endeavoured to lay open the property, you will come to the conclusion that we may fairly expect at your hands, at the least, the measure of liberality usually accorded, under such circumstances, to mineral tenants. Requesting your early attention to this letter,

I remain, yours sincerely,
'Geo. T. Clark.'

An interview between the parties was arranged, at which Frederic Knight pointed out his inability to vary the terms of the agreement, without the consent of the Court of Chancery, on account of the litigation then proceeding between himself and his family as to the administration of the property. A desultory correspondence continued throughout the year, directed on Frederic Knight's part towards securing the execution of the lease in the terms of the original agreement, and on the part of the Trustees towards securing a modification of those terms.

Early in 1858, further negotiations were abandoned, and proceedings for specific performance were instituted by Frederic Knight.

THE EXMOOR AND PORLOCK RAILWAY

By this time the real point at issue was the interpretation of the clause in the agreement under which the Dowlais Iron Company covenanted to provide the ironwork for a railway to the coast, to which reference has been made already. There was nothing to stop the Company from giving notice to determine their agreement to mine, but the question was whether they were bound by the agreement to supply rails and other ironwork for the railway. From the first discovery of ore, Frederic Knight had realized that the construction of a railway to Lynmouth or Porlock formed a vital part of any mining scheme on Exmoor. Before the agreement

with the Guest Trustees, and all through his relations with them, the question of the railway had been under discussion. Surveys of alternative routes had been made between Simonsbath and Lynmouth, on the one hand, and Simonsbath and Porlock Weir on the other; and negotiations had been carried on with Mr. J. Colwell Roe, of Lynton, the owner of the land outside the Forest boundary on that side, and with Col. G. W. Blathwayt, the owner of Porlock Weir and of the land between it and Larkbarrow, on the other side. Finally, an agreement had been reached with Col. Blathwayt, for whilst the Porlock route was the longer, the accommodation at the Weir was thought to be more commodious. All through these negotiations Mr. Bruce and Mr. Clark were interested parties; the question of routes and the problems of construction, finance, railway rates, and other matters were constantly under discussion between them and Frederic Knight.

He was quite unconvinced by the failure, first, of Messrs. Schneider & Hannay and, later, of the Dowlais Iron Company, to find payable ore. His own conviction was (and in this view he was confirmed by that of his advisers) not only that the property had not been fully developed, but also that such development as had been effected showed indications far more promising than his mineral tenants were prepared to admit. He thought he could relet the ground surrendered by Messrs. Schneider & Hannay, and he expected that Mr. Hill would be willing to extend his tract, and to prosecute his search for minerals with renewed vigour, if only the obstacle of transport to the coast could be overcome. There was also the subsidiary purpose which the railway would serve in facilitating the removal of building materials, lime, and agricultural requisites and produce to and from Exmoor. The financial position in which he found himself made it impossible for him to equip the line unaided, and, believing as he did in the potential mineral and agricultural wealth of his property, he was determined to leave no stone unturned in his efforts to

provide the one thing essential, in his opinion, to the realization of his hopes.

Frederic Knight set to work on the trackway, a large part of which was completed and may still be traced, and in 1858 he began to press for the delivery of rails by the Dowlais Iron Company. His final application is dated 4th January 1859, and, shortly after this, the breach between the parties widened to the point at which the question of the Company's liability became a matter for the decision of the Courts.

Frederic Knight's contention was that he had never disguised his own inability, on financial grounds, to construct the railway at his own charges, and the clause in the Dowlais Company's agreement for the supply by them of rails, &c., formed, and was always intended to be, an integral part of their contract of tenancy. The Company, on their part, contended that the railway was useless to them unless there were payable ore on Exmoor to be transported, and they claimed to establish that their liability to equip the line was contingent on this eventuality, which, of course, they sought to prove had not arisen. Much evidence was taken, on either side, from the principals themselves, from their servants, and from independent mining experts, and, on the question of the existence of workable iron ore, it is remarkable to note how completely opposed were the opinions of witnesses of every class, expert mining engineers, mineral agents, and working miners testifying in support of either side.

As in the Schneider case, the decision of the Court was entirely favourable to Frederic Knight, and judgement was pronounced for him, with costs, on 10th November 1859. The Guest Trustees, however, were satisfied that no good would come to them by any further serious operations on Exmoor, and negotiations were set on foot to bring about a compromise. Finally, by an agreement dated 12th June 1862, the matter was settled by their undertaking to pay Mr. Knight the sum of £7,000, of which £3,000 was paid on that date and

the balance by equal annual instalments commencing on the 1st January following. In addition, they handed over to him all their mining works, buildings, machinery, plant, &c., upon the premises at that time.

The termination of the occupation of Burcombe and Hangley Cleeve by the Dowlais Iron Company marks the end of the attempt to work the mineral deposits on Exmoor, except for a tentative effort some fifty years later, which will be described presently, for Mr. Anthony Hill seems to have faded away about the same time. Frederic Knight was still a believer, however, in the mining possibilities of his property, and he set to work at once to organize a new venture. His idea, this time, was to form a company for the comprehensive purpose of building and operating the railway from Simonsbath to Porlock Weir, and for raising and selling iron ore. The heads of the proposed agreement with the projected company included a payment of a royalty to him of one shilling per ton of ore, with an annual minimum of £1,500; the construction by the company of the Exmoor and Porlock Railway and all works incidental thereto; the payment to Col. G. W. Blathwayt of the rent of the land to be leased by him to Frederic Knight for that portion of the line, incline, &c., which lay on his estate; and the right reserved to Frederic Knight to transport the produce and merchandise of and for the service of his estate over the line, at certain maximum rates. For his part, he undertook to hand over to the company, free of charge, the works already executed on the line.

From the time of the breach with the Guest trustees, Frederic Knight had been pushing on with the project in every possible way. In July 1860 an agreement for a lease of the land, &c., required for the railway on Col. Blathwayt's estate was executed by the parties. The term was for 100 years from 25th March of that year, and Frederic Knight was to complete a single line within five years of that date. The land to be leased included a piece for the erection and operation of lime-kilns, a

provision made, no doubt, in view of the essential importance of lime in the husbandry of Exmoor and the difficulty of getting it on the estate. If the line were not made within the time stipulated, the agreement, or the lease if it had already been granted, was to determine automatically, unless the lessee should apply for an extension of time, which would be granted annually up to 1869, on payment of £100 to Col. Blathwayt for each year.

The consideration for the lease was a covenant by Frederic Knight to make the port dues up to £200 in each and any year in which they fell below that amount. Power to assign the lease was reserved to him, and it could be determined by him at any time by his giving two years' notice of his intention.

No complete plan of the direction to be taken by the railway has been found, but from the engineers' reports upon the project, and from references to it in deeds and correspondence, its proposed course may be identified fairly well. Starting at the Weir, the line was to proceed south-west to the neighbourhood of Worthy, whence the hill was to be surmounted by two inclines, the topmost finishing below that section of the Porlock–Lynton road lying between Whitstones and Pittcombe Head. Mr. Thomas Marsh, an engineer at Bath, who reported upon the scheme in May 1863, proposed to work trucks up and down these inclines by self-action, no power being required if the weight of the descending trucks loaded with minerals were utilized to raise the returning ones, which, for the most part, would be empty. From the top of the inclines, two miles from the harbour, haulage would again be necessary, and the line, after crossing the main road, which was to be diverted a little at this point, was to proceed to the neighbourhood of the Whitstones, where its bed, as dug out by Mr. Knight, first becomes visible. It can be traced from this point along the Exford road to the Exmoor Forest boundary wall, at Larkbarrow, across that farm and Tom's Hill to Warren, where its line of continuation becomes

doubtful. At a later date, however, when the question of the construction of the railway had been raised again (see p. 151), the intention was to carry it above Prayway Meads and across the Brendon road towards Exe Head. It was then to turn south, crossing the river valley by a bridge, and circling back to Prayway Head, whence it was to proceed, 'by sweeping curves', over Duredon and so down into the valley of the Barle. It is not easy to suggest an alternative to this course, and it seems probable that the railway, as originally projected by Frederic Knight, was to follow this route from the Warren. Reference to 'the Railway Terminus at Simonsbath' occurs on one of Messrs. Schneider & Hannay's mining plans.

There was to be a double line of metals, of ordinary narrow gauge, and the speed on the nine miles of locomotive line, between the Lynton road and Prayway Head, was to be limited to 12 to 15 miles per hour. Mr. Marsh estimated the total cost of the inclines and permanent way at £40,000, but suggested that a further sum of £10,000 should be provided for tramways and extensions in the Barle valley to connect the mines with the railway.

As regards the port of Porlock, a very comprehensive schedule of dues for goods, imported and exported, was drawn up—so detailed, in fact, as to suggest the probability of its having been copied, *in extenso*, from the schedule of some operating port, for only the amounts of the charges seem to have particular reference to traffic for or by the projected Exmoor and Porlock Railway. Thus, there were dues scheduled for the shipment or unloading of cannon, cannon balls, and gunstocks; for masts and anchors; for macaroni, salad oil, and anchovies; for hellebore, indigo, and iodine; for whalebone, canary seed, and ink, as well as for almost every conceivable article in ordinary requisition or production in the domestic and industrial life of a rural community.

The plans for the formation of the company had not matured by 1865, and Frederic Knight's solicitors

applied to Col. Blathwayt's agents, Messrs. Bailey and Norman, for a remission of the payment of £100 required for an extension of time, and for certain alterations in the plans for the railway. The reply was as follows:

'*Proposed line of Railway to Porlock Harbour.*

'It is with much regret that we are obliged very sweepingly to decline the proposal made on Mr. Knight's behalf in your letter received by us this morning. The fact is that altho' suiting Mr. Knight no doubt uncommonly well they would be by no means satisfactory to Colonel Blathwayt. . . .

'We may perhaps be pardoned for expressing some surprise that Mr. Knight should demur to pay such, after all, trifling premiums to retain possession of the key to the Casket in which he is sanguine that he has immense Wealth locked up. Whilst desiring much to facilitate Mr. Knight in his enterprise we are bound to say that neither our client nor ourselves are equally sanguine with him.'

This was, virtually, the end of Frederic Knight's attempt to work his deposits of iron ore. The company was never incorporated, nor was the railway built. Whether he retained his belief in the project in the face of all the adverse experience gained and opinions expressed is uncertain, but he made no further effort to continue. Although the venture had not resulted in producing for him the very considerable income, as a royalty owner, for which he had hoped, it certainly did not end without profit to him. His own expenditure in prospecting, in trial workings, in levelling the track of the railway, in expert advice, law charges, and so forth, must have been considerable, and his conduct of the whole enterprise in the face of his many other preoccupations is evidence of the capacity for work and determination of character which undoubtedly he possessed. But it must be remembered that, in addition to the dead rents which he drew at the rate of £500 per annum from the Dowlais Iron Works, together with other payments under this

head from Messrs. Schneider & Hannay and Mr. Anthony Hill, he had drawn £7,000 from that concern for permission to escape from their obligations, and £10,000 for the same consideration from Mr. Schneider. Tradition says that he derived some £20,000 from these various sources, and the actual amount cannot have fallen far short of this figure.

Whatever opinion may be formed as to the sincerity of the efforts of Mr. Schneider's firm to discover payable ore, there can be no question that Messrs. Clark & Bruce made an honest attempt to exploit the property. It is equally clear that Frederic Knight believed unquestionably in the commercial value of the minerals known to exist on his property, and, unable as he was to prove it himself, he was convinced that his lessees had been, in the one case inefficient, and in the other case deliberately unsuccessful, in their search. Thus he felt compelled to take such action as was legally available to him to secure the performance of the agreements with them, and the Courts upheld him in his view of the position.

THE EXMOOR MINING SYNDICATE

Some forty years after the attempt to exploit the minerals of Exmoor had been finally abandoned by Frederic Knight, a fresh examination of the property was undertaken by a Mr. Godfrey of Swansea. Picked samples of ore from the Deer Park were found to analyse up to seventy per cent. of iron, but no well-defined lodes of this quality could be traced. In 1910, a small syndicate was formed for the purpose of clearing the old workings and carrying out a further trial upon them. The members of the syndicate were Sir George Hingley, Bt., of the Dudley Iron Works; Mr. Ellis, of Workington; and Mr. Davis, of Ilkeston. The shaft sunk by Mr. Ebenezer Rogers, and deepened by Mr. Schneider, on Rogers' Lode, was pumped out and refitted, and the Dowlais Company's Main Drift was opened out afresh. The Exmoor–Porlock railway was re-surveyed, and plans and

estimates for its construction were prepared. The enterprise was attended with no marked success, and at the end of 1912 the syndicate broke up, having expended some £5,000 in their efforts to get ore. Work was continued by Mr. Davis, however, and several hundred tons of good ore were raised from Rogers' lode, but difficulties were encountered arising from the influx of water in great quantities during the winter,[1] and control by pumping cost more than the value received for the ore. At the same time, operations were started on Mr. Anthony Hill's old workings on the Picked Stones lode, and after October 1913, Rogers' shaft was again abandoned and work was confined to this mine. A lode measuring 8 ft. to 10 ft. in width was developed, and a considerable quantity of ore was brought to bank, but the want of Sir Frederic Knight's projected railway was badly felt, and road carriage swallowed up all the profit. All work was stopped in the summer of 1914, and the enterprise was abandoned, finally, after the outbreak of the Great War.

Since that date there has been no resumption of mining on Exmoor, and further attempts at a commercial exploitation of the minerals seem unlikely. It is commonly stated that the failure of the original venture, in the 'fifties, was occasioned by the competition of higher grade haematite ore imported cheaply from Spain, but there is no truth in this. The Exmoor iron ore analyses very well, some of it showing so much as seventy per cent. of iron, but it is not present in sufficient quantity to constitute a workable mining proposition. The veins or lodes, so-called, are not continuous, nor have they much depth. They are casual deposits of ore, more in the nature of pockets; and even granted cheap transport to a port it is improbable that the quantity available would suffice to warrant the expenditure of capital on its development.

[1] The adit which Mr. Schneider should have driven through the Deer Park, at the level of the Barle, would have drained these workings, but it was never completed.

HAMPSTEAD
PUBLIC LIBRARIES

X

THE PARISH OF EXMOOR

THE formation of new ecclesiastical parishes has been a regular feature of the growth of industrial England for the last hundred years; the expansion of the towns creates a need for an increase in the number of clergy to serve them, and brings about a sub-division of many old parochial districts into two or more parishes for ecclesiastical purposes. In rural areas, too, from one cause or another, the rearrangement of benefices is not without example, but as a case in which an extra-parochial district of more than 20,000 acres has first come into being as a unit both of Church and State, Exmoor must be unique in the social history of England of the past hundred years.

In 1818, when the ancient Royal Forest ceased to exist, Exmoor enjoyed no social institutions of any kind. There was one house, and one only, upon the Forest, that named by John Knight 'Simonsbath House', which was built about 1654 by James Boevey, and occupied at the time of the sale of the King's Allotment, and for a long time previously, by the deputy-forester. It was licensed as an inn, and sheltered a family of five. That the settlement of the Forest would follow its inclosure was the general expectation of the country-side, and, in contemplation of this contingency, provision was made, under the Inclosure Act, for the reservation of lands for the erection of a church, &c., the endowment of a parson, and the formation of a civil parish out of what was then an extra-parochial district.

It has been shown that, under John Knight's administration, settlement was a slow business. Most of the big constructional works—the boundary wall, the roads, the dam containing Pinkery Pond—were carried out by labour from the surrounding villages, or by gangs of imported labour, such as the Irishmen whom he recruited from the neighbourhood of his

brother-in-law's home in County Kerry. His farming, too, is said to have been carried on by single men, in the main, accommodated in bothies. However, some cottage-building went on at Simonsbath; a new inn was built, in the place of the one which had been annexed by the new owner for his own accommodation, and there were farm labour staffs, single or married is of little moment, accommodated at Cornham and at Honeymead. John Knight's establishment at Simonsbath House, too, in connexion with the stables, hunter stud, &c., must have been considerable.

In 1842, a start was made in permanent settlement, when farming by the landlord began to give place to the letting of farms, and early in 1845 the first move was made to secure the fulfilment of the undertaking for parochialization given by the Inclosure Act. John Knight had already retired from Exmoor, Frederic Knight was abroad at the time, and the initiative was taken by Harry Matthews, the tenant of Honeymead Farm. He caused a memorial to be drawn up, in the following terms, to the Commissioners of the Treasury:

TO THE LORDS COMMISSIONERS OF
HER MAJESTY'S TREASURY
THE MEMORIAL OF THE UNDERSIGNED INHABITANTS OF THE FOREST OF EXMOOR IN THE COUNTY OF SOMERSET AND DIOCESE OF BATH AND WELLS

HUMBLY SHEWETH

That by an Act of Parliament made and passed in the Session held in the fifty fifth year of the Reign of His late Majesty King George the third intituled 'An Act for vesting in His Majesty certain parts of the Forest of Exmoor otherwise Exmore in the Counties of Somerset and Devon (*sic*) and for inclosing the said Forest' it is amongst other things recited and enacted as follows, that is to say

'AND WHEREAS it may happen that some part of the said forest may hereafter become inhabited, in which case the inhabitants thereof, by reason of its remote distance from any Parish Church, and of its

being locally situate out of the limits or boundaries of any Parish will have no place of Public Worship to resort to, and it is therefore expedient that as well for the convenience of such inhabitants as for extending the benefit and influence of religious worship and instruction that such provisions should be made in that respect as are hereinafter contained, be it therefore further enacted, that such a quantity of land as shall be necessary for the Site of a Church and for a Churchyard or Cemetery and for the Site of a proper Parsonage House and Offices to be erected and built, and for a Garden and Yard or Homestead to be attached thereto to the extent in the whole of Ten Acres at the least, shall be reserved by the Crown out of the Lands so to be allotted to His Majesty as aforesaid, and shall not be sold, and that in case at any time hereafter the number of persons who shall be resident and inhabiting upon the said Forest shall in the judgment and opinion of the Lords Commissioners of His Majesty's Treasury and the Bishop of Bath and Wells for the time being be such as shall render it expedient that a Church shall be erected upon the said Allotment for the performance of Divine Worship therein and for the affording religious instruction to the inhabitants thereof, then and in such case the said Commissioners of His Majesty's Treasury shall by and out of the Land revenues of the Crown cause a New Church and a fit and convenient Parsonage House and Offices to be erected and built upon part of the lands so to be reserved as aforesaid and shall appropriate other part thereof near to the said Church for a Church yard or Burial Ground and the residue thereof as a Garden, Yard or Homestead to the said Parsonage House and shall inclose the same accordingly, in such manner as the said last mentioned Commissioners shall think proper for such purposes, and shall cause the said Church when so erected, and the Church yard so to be attached thereto, to be duly consecrated according to the usage of the Church of England and the same Church shall be for ever thereafter set apart and dedicated as and for a place of Divine Worship according to the Rites and Ceremonies of the Church of England for the use of all the inhabitants who shall so reside within the bounds or precincts of the said Forest, and shall be named and called The Parish Church of Exmoor and that the said Forest shall for ever thereafter form and be a distinct Parish of itself, and be called by the name of The Parish of Exmoor. Provided always that there shall be set apart and appropriated in the Church to be erected and built by virtue of this Act, such a number of Seats for the gratuitous accommodation of the Poor of the said Parish as the Lord Bishop of the Diocese shall think necessary, proper and convenient.'

That the said Forest of Exmoor has since been inclosed in pursuance of the above recited Act.

That part of the said Forest of Exmoor is now in-

habited by your Memorialists and others to the number of about two hundred persons, which number in consequence of the erection of several houses, which will be compleated in a short space of time, is expected to be soon increased to Three hundred at least, and will in all probability continue to increase.

That the quantity of land of the said Forest, in a state of Cultivation, now occupied by your Memorialists and others, is at least Ten thousand and nine hundred acres, and such Cultivation is daily extending.

That the distance from the central part of the tract of land under cultivation, to the nearest Church, namely the Parish Church of Exford, in the said County of Somerset, is Five Miles and half, and the other surrounding Churches are situate at a much greater distance.

That in consequence of the general elevation of the Forest being about One thousand one hundred feet above the level of the Sea, and the greater part of the Roads being in a very bad condition, your Memorialists are prevented without great labor and trouble from attending at any Parish Church.

That your Memorialists and other inhabitants of the said Forest amongst whom are a large number of laborers and their families are therefore, for all practical purposes, almost destitute of the means of public religious worship and instruction.

That your Memorialists are earnestly desirous that a Church should be built and endowed and that a Parsonage house and Offices be erected and built for the use of the Minister of such Church in pursuance of the provisions of the said recited Act.

> WHEREFORE your Memorialists humbly pray that your Lordships will cause such Church to be built and endowed and such Parsonage House and Offices to be erected and built under the provisions of the said recited act And your Memorialists as in duty bound will ever pray &c.

Harry Matthews [1]	Thomas Burfitt	John Stone
Edward Godwin [2]	James Lisbeck	William King
George Cox	James Hunt	Robert Coward
Charles Andrews	John Criddle	John Matthews [3]
Harry Cox	James Long	Edward Hunt
Daniel King	John Hale	William Hassell

Frederic Knight heard news of this memorial on his return to England, and the Lords Commissioners applied to him for his observations upon it. His reply, dated 4th July 1845, shows that he was very much upset that any such action should have been taken 'secretly during my absence from England by a Tenant who is in every way endeavouring to oppose and annoy me, as a sufficient reason for throwing difficulties in the way of the exertions and expenses I am undergoing to improve Exmoor Forest'. From it may be learnt that the population of the Forest had risen from 5 in 1818 to 51 in 1831, and to 160 at the date of the memorial, of whom 91 only, 49 adults and 42 children, would be gainers in distance from a place of worship, if a church were erected at Simonsbath. Referring to the signatories, his opinion of Harry Matthews is made quite definite by the quotation from the letter given above, but it should be stated that the reason for his dislike has not transpired, and Matthews was the only one of Frederic Knight's original tenants who can be said to have made good on Exmoor; going to Honeymead in 1842, he remained there for twenty years. The second of the signatories, Edward Godwin, is described by Frederic Knight as being 'a tenant not likely to remain', in which opinion he proved correct, and he points out that John Matthews, a brother to Harry, was not resident on Exmoor at all, being the tenant of a farm adjoining Brendon Church, where it may be presumed that his spiritual necessities were adequately provided for. For the rest, he remarks that nearly all the signatories were labourers employed either by Harry Matthews or by Godwin.

[1] Tenant of Honeymead. [2] Tenant of Simonsbath Barton.
[3] Tenant of a farm at Brendon.

As to the statements in the memorial, Frederic Knight controverted them all. So far from there being 10,000 acres under cultivation, he says that the amount at this date was less than 2,500 acres, and that so far from the population being on the increase, it had been stationary for the previous fifteen years. 'Making a Parish of the Forest will be at this moment a great bar to my letting the new farm house I am building, [? at Driver, which was the next farm to be let off, in 1847] and a great injury to me at this moment. If I succeed in the system of colonization I am pursuing, a few years will probably increase the population so as to make a church desirable, and in that case I shall certainly apply for one to be erected. Under the present circumstances, however, I sincerely hope that you will not consider a *greatly exaggerated statement* . . . I am sincerely attached to the Church of England and pledge myself to apply for a church when it may be necessary.'

Probably the key to Frederic Knight's objections to the parochializing of the Forest is contained in his statement to the effect that it would interfere with his plans for letting the new farm and colonizing Exmoor. A few years later, the fact that the Forest was extra-parochial was advertised as an attraction of the new farms then awaiting tenants, and no doubt farmers would welcome the escape from parochial rates which this condition represented. The maintenance of the poor, the repair of the highways, the upkeep of the church, these were then, as now, liabilities which many would like to escape, and a landlord who could offer farms to let in a district exempted from them, was in a very exceptional position.

In their Report to the Treasury upon the memorial and the objections to it, the Commissioners of Woods and Forests remarked that 'it was not considered that the wants of the district were sufficient to justify the work [of building the church and parsonage] being at that time undertaken', and for the time being the matter lapsed.

About eight years later, in December 1852, the situation had changed. Ten more farm houses, with their complement of cottages, had been built, and seven of them were occupied; a mine had been opened on the banks of the Barle and nine miners were in occupation of cottage accommodation erected there; the equipment of more farms, and a great development of the mining enterprise, was in contemplation; the population had risen in seven years from 162 of all ages and sexes to no fewer than 281 on Frederic Knight's estate, and 376 on the Forest as a whole. Application had been made to him for the use of some building on the Forest as a Methodist Chapel; and on 9 December 1852 he wrote to the Treasury that 'the want of a Church, and of a Resident Clergyman, is now seriously felt by the inhabitants of the said Forest. . . . I trust that your Lordships will therefore consider that the circumstances contemplated by the said Act of Parliament [the Exmoor Inclosure Act, 55 Geo. III, c. 138], and explained in detail in the sections 70 to 80 thereof, have now arrived, and that Your Lordships will be pleased to give your assent and authority for building a Church and Parsonage house, and for endowing a Minister, on the terms and in the manner laid down in the said Act. The approval of the Lord Bishop of Bath and Wells, of the erection of a Church on Exmoor, has been signified in a private letter from his Lordship's secretary.'

The Bishop, Lord Auckland, wrote, at the same time, 'to assure your Lordships that the application has my entire sanction and support'.

The matter took the usual leisurely course customary where Government action is involved. The Lords Commissioners of the Treasury referred it to the Commissioners of Woods and Forests; they passed it on to Mr. Clutton, their Receiver for the district in which Exmoor is situated, and in May 1853 he reported favourably to the application. He added, incidentally, that there was an infant school in the village, provided by Frederic Knight, at which thirty children attended,

but that it did not, for want of proper supervision, appear to be satisfactorily conducted. The Commissioners of Woods and Forests then consulted their legal advisers upon certain points involved in the application, and in September 1853 they laid all the facts before the Lords of the Treasury in a document which contained no expression of any opinion of their own upon them.

The Treasury decided that the time had come to carry out the provisions of the Inclosure Act for the parochialization of Exmoor, and in 1855 work was begun.

A church to accommodate 209 people, dedicated to St. Luke, was built on the site reserved, where formerly the annual pony sales had been held, and it was consecrated by the Bishop, Lord Auckland, on 21st October 1856, 'in bad weather'. The parsonage was erected at the same time, and the total cost was estimated to be £2,972 6*s*. 0*d*. The ecclesiastical parish of Exmoor, in the rural deanery of Dunster, thus created, was defined by the boundaries of the old Royal Forest, and in extent it is the largest parish in Somerset. The living is a perpetual curacy, valued then at £150 per annum, and now at £250 per annum, with ten acres of glebe; and the first incumbent was a friend of Frederic Knight, the Rev. W. H. Thornton, of Trinity College, Cambridge, then curate to the vicar of Lynton, who was presented by Lord Palmerston on behalf of the Crown. He was the author, in later life, of two volumes of reminiscences, which might have contained much of historical interest about the Forest during the four years of his incumbency, when development was very active, but the subject matter is mostly small-talk.

The difficulties of life for a young parson—Mr. Thornton was only twenty-six years of age at the date of his appointment—with a rapidly growing family and the nearest doctor eleven miles distant, led to the resignation of the first incumbent after four years, but the Exmoor parsons have generally remained long enough to learn the necessities of their parishioners

and to minister to them. By an exchange of patronage arranged in 1889, the living is now in the gift of Earl Fortescue.

As regards the civil parish of Exmoor, there is no doubt that it was created at the same time as the ecclesiastical parish, by virtue of the Inclosure Act of 1815 (Sec. LXXVIII), which enacted that this process should follow the consecration of the church. The Order of the Poor Law Commissioners for this purpose has not been found, but the first assessment of the parish, which still exists, was made in January 1858. It was sworn by Robert Smith and William Poole, 'both of Exmoor, surveyors of highways', before M. Fenwick[1] and Arthur Locke, justices of the peace for the county of Somerset, and the new parish was described as being in the 'division of Dulverton'. The gross estimated rental of the parish at this date, including the non-Knight properties, which were situated, for the most part, in the south-eastern corner of the parish, below Sherdon Water, and on the western side, beyond the river Barle, and amounted to some twenty per cent. of the total area, was £5,147. Frederic Knight's estate was assessed at £4,336, of which £3,072 was in respect of lands let, and £1,264 of lands in hand.

It does not appear that Exmoor was made a member of the Dulverton Union, and it would seem that for the first four years of its existence as a civil parish it administered its own affairs as an independent unit. In November 1861, however, the Poor Law Commissioners issued an Order under which it was to be added to South Molton Union from the 25th day of December next ensuing, and so it remained, the only constituent member of this Union outside the county of Devon, until the enactment of the Local Government Act, 1894, the Act which set up the Rural District Councils. These bodies were constituted definitely on the basis of county

[1] Mordaunt Fenwick, who later added the name of Bissett, by which he is well remembered as Master of the Devon and Somerset Staghounds from 1855 to 1880.

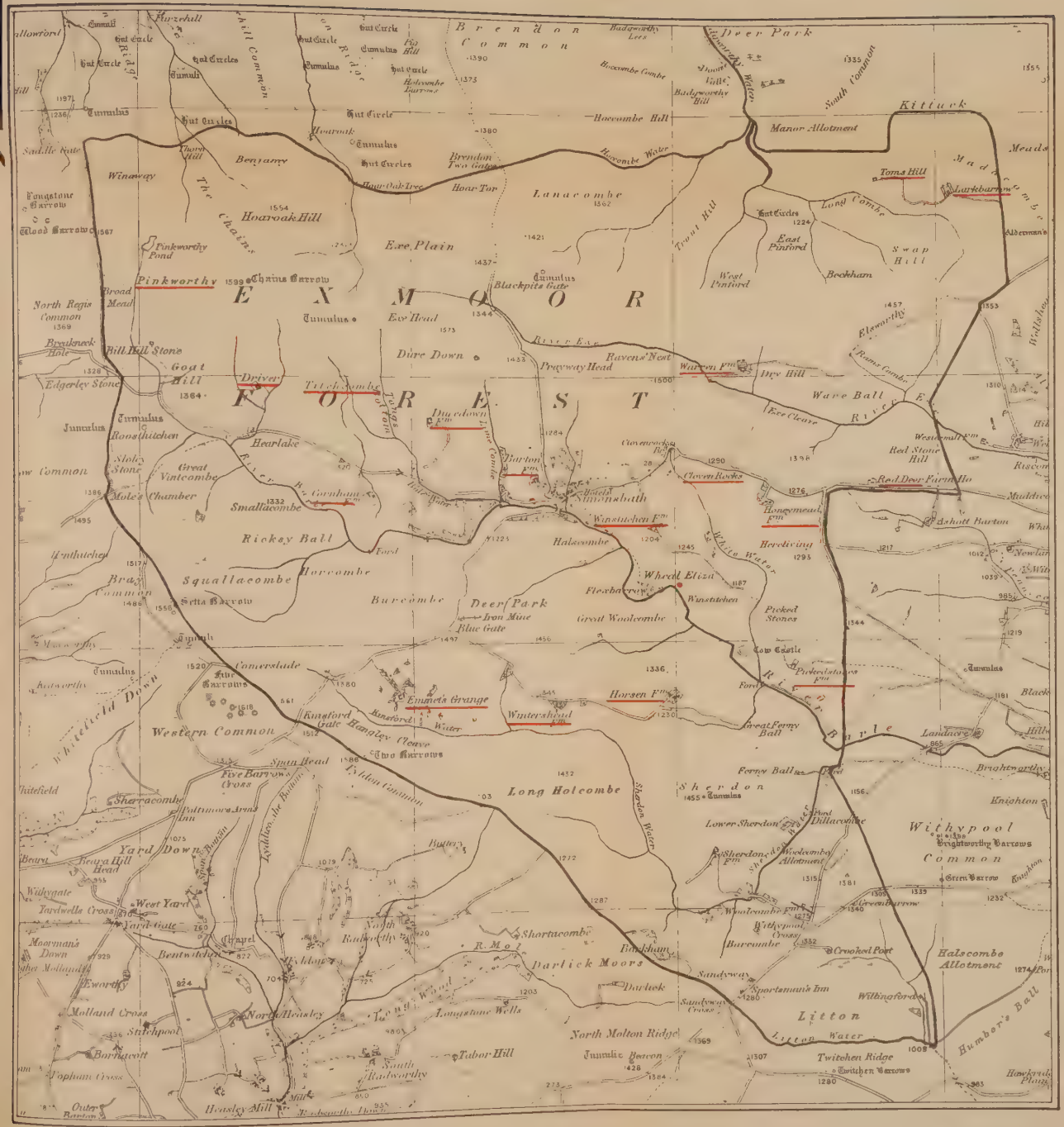
boundaries, and Exmoor, left high and dry by this principle, had to be dealt with by special provision. Accordingly, in November 1894, an Order was issued by the Local Government Board, which had been set up in 1871 and had absorbed the Poor Law Board, providing for the temporary administration of the parish by the District Council of the Rural District of South Molton, with which it was then united.

So things continued for a few months, when the Somerset County Council, acting in pursuance of powers given by the Local Government Act, 1888, (the Act setting up the County Councils) caused an inquiry to be made as to the desirability of transferring the parish of Exmoor to the Rural District of Dulverton, in the same county, following which an Order was made for the transference in April 1895, which was confirmed in January of the following year by the Local Government Board.

Since this date there has been no change in the status or grouping of the parish. The population to-day is about 300 persons.

As regards the parliamentary franchise, the position of the residents upon the Forest, prior to the formation of the parish, was determined by the Reform Act, 1832 (sec. 38), which provided that every place, whether extra-parochial or otherwise, having no Overseers, should be deemed to be within the adjoining parish or township for the purpose of making out the Voters' List. Those qualified were included in the Exford parish list.

The Local Government Board Order of January 1896 was the last act in the history of the reclamation of Exmoor Forest. Its evolution has been traced from the days when it was an uninclosed waste of some 20,000 acres; untraversed save by pack-horse tracks; uninhabited save by one family; untilled save for a few acres; unstocked save for summer grazing—to the time when it was ring-fenced as to the major part; accessible



Based upon the Ordnance Survey Map
with the sanction of Controller of H.M. Stationery Office.
Printed at the University Press, Oxford.

Scale 1 inch to 1 mile

HAMPSTEAD
PUBLIC LIBRARIES

from all sides by good roads; giving shelter and support to a population of 300 people working, for the most part, on some fifteen adequately equipped farms comprised in about 5,000 acres of improved and inclosed lands; permanently stocked with some 200 horses, 1,000 cattle, and 10,000 sheep, exclusive of lambs; the district parochialized both for ecclesiastical and civil purposes. Some of the work undertaken in the process of this achievement may have been fantastic, other of it unfruitful, while the rest must have been unremunerative regarded merely as an investment of capital. But here, and for all time, there has been created, as the result of it, a thriving community, contributing in men and material to the welfare of the State—and this, surely, is the only standard by which to measure the success of the great work of the old iron-master and his son. Without doubt, the reclamation of the Forest by them was one of the greatest achievements, of its kind, that the nineteenth century has to show.

BIBLIOGRAPHY

THOMAS DYKE ACLAND. *The Farming of Somersetshire.* 1851.

T. S. ASHTON. *Iron and Steel in the Industrial Revolution.* 1924.

EDWARD GEORGE BENTHAM and JOHN LINDLEY. *Selections from the Physiological and Horticultural Papers published in the Transactions of the Royal Horticultural Society by the late T. A. Knight. Prefixed by a Sketch of his Life.* 1841.

JOHN BILLINGSLEY. *General View of the Agriculture of the County of Somerset.* 1795.

A. G. BRADLEY. *Exmoor Memories.* 1926.

Burke's Landed Gentry.

JOSEPHINE E. BUTLER. *Memoir of John Grey of Dilston.* 1869.

Castle Hill Estate Office Papers.

CHARLES PALK COLLYNS. *Notes on the Chase of the Wild Red Deer.* 1862.

Dictionary of National Biography.

HENRY HALL DIXON ('The Druid'). *Scott and Sebright.* 1862.

PHILIP EVERED. *Staghunting with the Devon and Somerset.* 1902.

Parish of Exmoor Rate Books.

J. NEVILL FITT. 'Waste Hill Lands: How they may be utilized by Pony Breeding.' *Journal of the Royal Agricultural Society of England.* 2nd series, vol. xv. 1879.

Hon. JOHN WILLIAM FORTESCUE. *Records of Stag Hunting on Exmoor.* 1887.

H. BYNG HALL. *Exmoor; or the Footsteps of St. Hubert in the West.* 1849.

ARCHIBALD HAMILTON. *The Red Deer of Exmoor.* 1907.

CHARLES E. H. CHADWYCK HEALEY. *History of Part of West Somerset.* 1901.

EDWARD T. MACDERMOT. *The History of the Forest of Exmoor.* 1911.

JOHN LLOYD WARDEN PAGE. *An Exploration of Exmoor and the Hill Country of West Somerset.* 1890.

ALBERT PELL. *The Making of the Land in England.* 1899.

ROWLAND E. PROTHERO (Lord Ernle). *The Pioneers and Progress of English Farming.* 1888.

EDWIN JOHN RAWLE. *Annals of the Ancient Forest of Exmoor.* 1893.

CHARLES GAY ROBERTS. 'Sutherland Reclamation.' *Journal of the Royal Agricultural Society of England.* 2nd series, vol. xv. 1879.

SAMUEL SIDNEY. 'The Ponies of Exmoor.' *The Illustrated London News.* Oct. 22, 1853.

'Exmoor Farming.' *The Illustrated London News.* Nov. 19, 1853.

'Exmoor Reclamation.' *Journal of the Royal Agricultural Society of England.* 2nd series, vol. xiv. 1878.

The Book of the Horse. New edition. 1893.

ROBERT S. SMITH. 'The Cultivation of Moorland.' *Journal of the Royal Agricultural Society of England*. 1st series, vol. xvii. 1856.

'Irrigation.' *Journal of the Bath and West of England Society*, vol. iv. 1856.

'The Exmoor Cottages.' *Journal of the Bath and West of England Society*, vol. vi. 1858.

WARYNGTON W. SMYTH. 'On the Iron-ores of Exmoor.' *Quarterly Journal of the Geological Society*. 1859.

F. J. SNELL. *A Book of Exmoor*. 1903.

The Blackmore Country. 1906.

Sporting Magazine. 1824; 1860.

W. H. THORNTON. *Reminiscences and Reflections of an Old West Country Clergyman*, vol. i. 1897.

EDWARD J. F. TOZER. *The South Devon Hunt*. 1916.

Victoria County History of Worcestershire, vol. iii.

Wolverley House Papers.

WOODROW WILSON. *The Cambridge Modern History*, vol. vii. The United States, Chapter xiii. 1903.

HAMPSTEAD
PUBLIC LIBRARIES

INDEX

Abercairn, 120.
Aberdeen Angus cattle, 40.
Acland Arms, the, 109.
Acland, Sir Thomas (10th bt.), 17, 19, 20, 21, 23, 24, 25, 116.
——(11th bt.), x, 14, 59, 67, 71, 82.
—, Thomas P., 20.
Aghadoe, Co. Kerry, 11, 45.
Agistment of stock on Exmoor Forest, 23, 24, 25, 41, 70, 79, 102, 111.
Agricultural Holdings Act, 1875, 53.
———, *1883*, 64 *fn.*
Agriculture, in 1818 and in 1929, 113.
—, Pioneers of, 1.
Allen, tenant of Driver, 72.
Allotments on Exmoor Forest, 19.
Apperley, C. J. ('Nimrod'), 28.
Arab horses, 41, 45–6.
Ashcombe, 98.
Auckland, Lord, bp. of Bath and Wells, 159, 160.

Badgeworthy herding, 104.
— Water, 34.
Bailey and Norman, Messrs., 150.
Baldwin, Rt. Hon. Stanley, 12.
Bale Water, 39.
Balliol College, Oxford, ix, 8.
Bamfylde, Sir Charles W., bt., 20, 21, 116.
Barford and Perkins, Messrs., 92.
Barle, river, 31, 34, 117, 126, 149, 161.
Barnstaple, 30, 72.
Barton, *see* Simonsbath Barton.
Bath and Wells, bishop of, 159.
Bath and West of England Society, 55.
Bedford, Duchess of, 82.
—, Dukes of, 2.
Bessemer's process, 131.
Billingsley, John, 22.
Birch Cleeve, 33.
Bissett, Mordaunt Fenwick, 161.
Blackland, 116.
Blackmore, Rev. J., 24.
Blackwell, Samuel, 120, 121.
Blathwayt, Col. G. W., 125, 145, 147, 148, 150.
—, Mrs., 20.
Blue Gate, 40, 81, 116.
Boevey, James, 116 *fn.*, 153.
Boundary wall, 28, 153.
Bradley, A. G., 30, 31.
Bratton Down, 43.
Brendon, 30, 45.
— Hills, 116, 117, 120, 121.
—, Manor of, 27.
Bridgwater, 30; assizes at, 51.
Bristol, 30, 40, 45.
British Museum, Knight family trustee of, 7.
Bruce, Henry Austen, M.P., 123, 141, 145, 151.
Bullas, John, tenant of Duredon, 65.
Bullock-teams, 36, 59, 91.
Burcombe, 116, 125, 126.
— iron mines, 119, 134, 147.
Burgess, William, 119.
Buscombe, Great, 33.
—, Little, 33.

Carlisle, 40.
Carnarvon, Earl of, 121.
Castle Hill, 104, 110.
Cattle, Angus, 40; Devon, 42; Hereford, 41; Shorthorn, 42; West Highland, 40, 41, 42, 46.
Chains, The, 31, 33, 112.
Challacombe, 30, 86.
Charles, 24.
Chartists, 141.
Cheddar cheese, 67.
Cheese-making, 54, 66, 67.
Chichester, Sir Arthur (7th bt.), 27, 73 *fn.*
Clark, George Thomas, 123, 131, 151.
Clinton, Lord (18th), 20.
Cloven Rocks, 50, 118.
Cock, John, 117.
'Coke of Norfolk', *see* Leicester, Earl of.
Combe Martin, 30, 39, 95, 121, 141.
Comer, Robert, 126.
Common rights, extinction of, 27, 86.
'Continuous cropping', 80–1.
Copper mine, Wheal Eliza, 116–19, 133, 134, 141.
Cork, 45.
Cornham, 34, 38, 39, 50, 51, 53, 85, 89, 100, 105, 125, 154.
— Brake, 112.
— Ford, 116, 126, 127.
— Hill, 53.
Cornwall, 30.

Cost, of farm buildings, 57; of fences, 57; of cultivations, 58–9; of equipping a farm, 69.
Cottage Building, 44–5, 131–7, 154.
Cow Castle, 117.
Crawshay, Robert, 137, 140.
Cumberland, land reclamation in, 40.
Cunynghame, Daniel, 9.

Deer damage, 81.
— stealing, 43–4, 81, 118.
— park, at Simonsbath, 31, 40, 81.
Deer Park iron mine, 119, 121, 134, 141.
Demesne farming, 34.
Devon cattle, 42, 67.
Dixon, Henry Hall ('The Druid'), 77, 135.
—, William and Ford, tenants of Tom's Hill, 72.
Dowlais Iron Co., the, 121, 123, 125, 127, 129, 131, 133, 134, 140, 144, 145, 146, 151.
Downton Castle, Salop, 7.
Drainage, 33, 56.
Driver, 53, 54, 71, 72, 158.
Driver Cot, 31.
'Druid, The', *see* Dixon, H. H.
Dudley, 120, 121.
— Iron Works, 151.
Dulverton Rural District, 162.
— Union, 161.
Dunstan, William, 141.
Duredon, 53, 57, 65, 71, 86, 89, 91, 98, 100, 105, 149.

Ebbw Vale Iron Co., the, 120, 140.
Ebrington, Lord, *see* Fortescue, 4th Earl.
Eddy, Stephen, 142.
Ellis, —, 151.
Emmett's Grange, 37, 50, 56, 65, 125.
Epsom, 65.
Ernle, Lord (Prothero, R. E.), 29.
Evans, John, 127.
Exe Cleeve, 112, 135.
— Head, 149.
—, river, 34.
Exford, 30, 156.
Exmoor and Porlock Railway, 144–50.
— farmers, 105–6; their farming systems, 106–9.
EXMOOR:
Forest of, Inclosure Act, 17, 19; Wardenship of, 17; leases of, 17; survey of, 18; the King's Allotment on, 19, 20–1, 99; allotment in lieu of tithes on, 19, 20; inclosure award, 19, 20; area of, 20; sale of mineral rights, 22; agistment of stock on, 23, 24, 25, 41, 70, 79, 101, 111; forester's accounts, 23, 24, 25; inclosure map, 29; trackways on, 30; fallow-deer on, 31, 81; red deer on, 81–2; Irish labourers on, 32, 39, 44, 153; no heather on, 35; soils of, 35; white clover on, 38; four-course farming on, 38; lime burning on, 39; wages on, 39; Arab horses on, 41; experiments with cattle, 41–2; with sheep, 42–4; with pigs, 45; with horses, 45–7, 70; solitude of, 44; rental of farms on, 51, 65, 73, 86, 99, 161; farm-houses on, 53, 100, 132; cheese-making on, 54, 66, 67; water meadows on, 55; remarkable growth of turnips on, 68; failures of early farmers on, 71; condition of farming in 1852, 72; temperature of spring, 78; woodlands on, 82, 112; mining on, 83, 115–52; sheep herdings on, 90, 100; farm stock in 1897, 103; in 1929, 163; licensed houses on, 109; brewing on, 109; in the Great War, 112; murder on, 119; projected railway on, 125, 147–51; settlement of, 153; parliamentary franchise on, 162.
Parish of, 20, 21; rate books, ix; formation of, 83, 153, 160; memorial from inhabitants, 158; from Mr. Knight, 159; boundaries of, 160; first assessment, 161; gross estimated rental of, 161; population of, 162.
Perpetual curacy of, 83, 160.
Reclamation, prices of produce at commencement of, 28; construction of boundary wall, 28; of roads, 29; surface drainage, 33, 56; plantations, 33; beginning of arable farming, 34–6; equipment of farms, 50, 52; construction of fences, 52, 56; setting out farms, 56; cost of buildings, 57; cultivations, 58–9, 95–6; estate expenditure, 68, 71; financial results, 69, 70, 95; by rape cultivation, 80, 86–7, 91; with steam-tackle, 92–5; area cultivated, 158.
St. Luke's Church, 21, 155, 160.

Falkirk Fair, 40.
Fallow-deer, 31, 81.
Family farmers, 100, 105–6, 108–9.
Farm-houses, 53, 56.

Fences, construction of, 52, 56–7.
Fenwick, M., *see* Bissett, M. F.
Flexbarrow, 112, 117.
Forest of Dean, 129.
Fortescue, Earl (2nd), 20, 21, 104.
—, — (3rd), 86, 104.
—, — (4th), viii; succeeds to the Forest, 104; estate policy, 104–6, 111–12; farming practice, 110–11.
Fowler, Messrs. John and Co., 92.
Free-suitors, 20.

Gallon House, *see* Red Deer.
Gibbs, Edward Adolphus Couling, 13.
—, Florence Marie Couling, Lady Knight, 13.
Gloucester, 30.
Godfrey, —, 151.
Godwin, Edward, tenant of Barton, 50, 157.
Goosemoor, 120, 128.
Gourdie, John, 89 *fn.*
Grass mixtures for Exmoor, 76, 87, 91.
Great Exhibition, 1851, 120.
Great Vintcombe, 31.
Guest, Sir John, bt., 124.
—, Lady Charlotte, 124.

Haddon, 82.
Halscombe, 112.
Hangley Cleeve, 121, 125, 129, 147.
Hannam, William, tenant of Cornham, 51, 67.
Hannay, Robert, 133, 134, 138, 145, 151.
Harrold, G. A., tenant of Warren, 65, 72.
Hawick, 110.
Hawkridge, 20.
Headley, Lord (1st), 11, 39, 41, 45.
Heather, destruction of by grazing, 35.
Hedditch, John, tenant of Driver, 53.
Herdings, 90, 100.
Hereford cattle, 41, 67.
Hibberd, Richard, tenant of Emmett's Grange, 50.
Hill, Anthony, 135–7, 141, 145, 147, 151, 152.
Hingley, Sir George, bt., 151.
Hoar Oak, 89, 90, 100, 121, 134.
— — Tree, 112.
Holkham, 10.
Honeymead, 34, 38, 50, 53, 71, 85, 105, 112, 117, 118, 133, 154.
— Allotment, 34, 50, 100.
Hope-Weir, Helen Charlotte, 11.
Hope-Weir, Hon. Charles, 11.
Hopkins, John, 126.
Horcombe, 125.
Horsen, 53, 56, 65, 68, 71, 81.
Horses, Arab, 41, 45.
—, Percheron, 95 *fn.*
—, Suffolk, 102.
Howchin, William, 72, 80.
Hunter stud, 46, 70.

Ilfracombe, 56.
Inclosure and Sale of the Royal Forest of Exmoor, 17.
Inclosure movement, 1.
Irish labourers, 32, 39, 44, 153.
Iron mines, North Devon, 141.
— trade, distress in, 139–41.
Ison Common, 116.
— Hill, 116.

Kale, thousand-headed, 90.
Kentisbury, 86.
King's Allotment on Exmoor Forest, 19; area of, 20; sale of, 20, 21; income of, 99.
Kinsford Water, 34.
Knight, Charles Allanson, 11, 12, 41, 49, 55, 71, 82.
—, Charles Lewis William Morley, 8.
—, Edward, 9.
—, Edward Lewis, 11, 38, 68 *fn.*
Knight family, 5–9; pedigree of, 6.
—, Frederic Sebright Winn, 13, 99, 131.
—, Frederic Winn, K.C.B., M.P., 11; takes over management of the Forest, 12, 49; elected member for West Worcestershire, 12; parliamentary secretary to the Poor Law Board, 12, 83; engages in commercial life, 12; volunteer movement, 13; created K.C.B., 13, 102; marriage, 13; sells the reversion to Exmoor Forest, 13; death, 14, 103; as road-maker, 30; letting of farms by, 50; as architect, 53; succeeds to estate, 65; difficulties as executor, 71; his farming systems, 80–1, 90, 101–2; experiments with Scottish sheep, 88–90; introduces machinery, 90, 92–5; search for iron ore, 119–21; his mining leases, 125, 134, 135; law-suits, 138, 141, 144, 146; his attempts to construct a railway, 145–50; abandonment of mining, 150; objection to the formation of a parish, 157–8; petition for same, 159.
—, Lady (Frederic), 13, 14, 131.

Knight, Helen Georgiana, 11.
—, Isabella, 11.
—, John, birth, 10; visits Holkham, 10; attends Woburn sheep-shearings, 10; marriage, 11; purchase of the King's Allotment, 21; of Sir Charles Bamfylde's allotment, 21, and of Sir Thomas Acland's allotment, 21; purchase of mineral rights, 22, 116; begins reclamation of the Forest, 28; as road-maker, 29–30; begins a mansion at Simonsbath, 31; incloses deer-park, 31; constructs Pinkery Pond, 31; grants mining lease, 33, 117; travels to buy stock, 40–1; experiments with live stock, 41–6; farming policy, 47; retires from Exmoor, 49; death, 49, 65, 70.
—, Margaret, 11.
—, Richard Payne, M.P., 7–8.
—, Thomas Andrew, F.R.S., 8, 13.
Knightean medal, Royal Horticultural Society, 8.

Land Reclamation, 1; Lincoln Heath, 2, 51; Lincolnshire Wolds, 2, 52; Norfolk, 2; Suffolk, 2; Yorkshire Wolds, 2; costs and profits of, 3–5; stages in, 36–8, 74–7; Cumberland, 40; in Sutherland, 92.
— tenure, landlord and tenant system of, 27, 52.
Landlord and Tenant, 49, 104–6.
Larkbarrow, 53, 65, 67, 71, 73, 86, 89, 100, 145, 148.
Lawes, Sir John Bennett, 17.
Leases, 51, 59–64.
Le Blanc, Charles, tenant of Simonsbath House, 65, 84.
Leicester, Earl of, 2, 10.
Lethbridge, Sir John, bt., 120.
Licensed houses, 109.
Lime-kilns, 30, 39, 95, 147.
Liming, 37, 38, 75, 95.
Lincoln Heath, 2, 52, 68.
Lincolnshire Chronicle, The, 64.
'Lincolnshire Custom', The, 52, 59.
Linnean Society, 8.
Llewellyn, William, 121–3, 135.
Local Government Act, 1888, 162.
— — —, *1894*, 161.
Local Government Board, 162.
Lock, John, 20.
—, William, deputy forester, 25.
Long Holcombe, 99.
Ludlow Grammar School, 8.
Lynmouth Harbour, 54, 144.

MacDermot, E. T., ix, 17, 22 *fn.*, 24, 25, 116 *fn.*
Machinery on Exmoor, mowing and haymaking, 90, 91; straw cultivation, 92–8.
Market Deeping, 65, 68.
Marsh, Thomas, 148.
Martin, George, 125.
Matthews, Henry, tenant of Honeymead, 50, 71, 117, 154, 157.
—, John, 157.
—, Oliver, 117, 118.
Meadows, James, tenant of Larkbarrow, 65, 67, 73.
Merthyr Tydvil, 131, 135.
Metropolitan Meat Market, 91.
Miners, Welsh, 126; distress amongst, 140; Devon, 126.
Mines, Roman, 116, 120.
Mining, search for ore, 83, 121; report on ore veins, 122–3, 126–7; leases, 125, 134, 135; beginning of, 125; progress of, 127–30, 137; housing for, 131–3, 137; rents, 125, 134; troubles with tenants, 138–9; misgivings concerning, 141–2; stoppage of, 142–4; costs and returns, 143; payments by tenants, 139, 146, 150; end of first attempt at, 147; a new project, 147–51; its termination, 150; the last venture, 151–2; cost of, 152.
Mogridge, J., agent for Exmoor, 53, 54.
Mole's Chamber, 31, 109, 116.
Molland, 53, 117.
Morley, Earl (1st), 20.

Nesbit, J. C., 35.
Newlands, 39.
'Nimrod', *see* Apperley, C. J.
North Forest, 99.
— Molton, 23.

Orford, Earl of (3rd), 17.
Ottoman Bank, the, 124.

Palmerston, Lord, 160.
Parliamentary franchise, 162.
Parson's Allotment, 100.
Pell, Albert, 29, 80.
Picked Stones, 50, 72, 112, 118, 121, 135, 152.
— — iron mine, 119.
Pigs, Westphalian, 45.
Pinford, East, 33.
—, West, 33.
Pinkery Farm, 32, 53, 70, 73 86, 89 100, 105.

Pinkery Pond, 31–2, 112, 153.
Pioneers of Agriculture, 1.
Pittcombe Head, 148.
Plymouth Iron Co., 135.
Ponies, Exmoor, 45–6, 70, 79, 88, 98, 111.
Poor Law Board, 12, 83, 161, 162.
Popple, —, tenant of Barton, 72.
Porlock, 23, 125.
— Weir, 125, 144, 148; port dues, 149.
Portland, Duke of, 40.
Prayway Head, 40, 98, 149.
— Meads, 149.
Prothero, Rowland E., *see* Ernle, Lord.
Pusey, Philip, 55.

Quantocks, the, 30, 82.

Railway, projected, 125, 134; necessity for, 144; surveys for, 145, 148, 151; commencement of, 146; abandonment of, 146; later projects, 147–50, 151; course of, 148–9; Simonsbath terminus, 149; cost of, 149.
Ralph, Parson, rector of Exford, 68 *fn.*
Rape, cultivation of, 80, 86, 90.
Rape-pastures, 77, 87, 91.
Rawle, E. J., 17.
—, Thomas, 23.
Red Deer (Gallon House), 48, 71, 73, 74, 109, 112, 135.
Red deer, wild, 81–2.
Reform Act, 1832, 162.
Rental of farms, 51, 65, 73, 86, 99, 161.
Riccard, Russell Martyn, 117.
Ridd, Richard, tenant of Pinkery, 73.
Road construction on Exmoor Forest, 29–31, 156.
Roe, J. Colwell, 145.
Rogers, Ebenezer, 120, 121, 135, 141, 151.
Rothamsted Experimental Station, 17.
Rouse-Boughton, Sir William E. K., 8.
Royal Agricultural Society of England, 55.
Royal Horticultural Society, 8.
Royal Society, 8.
Russell, Mrs. Jack, 28 *fn.*
—, Parson Jack, 80 *fn.*
Rutland Agricultural Society, 54.

Savage, F., C.E., 92–3.
Scale, Henry, 130, 132–3, 136–7.
Schneider, Henry William, M.P., 133, 134, 138, 145, 151.
Scott, John, 66.
Searson, Robert, tenant of Horsen, 65, 68.
Sermoneta, Duke of, 11.
Sheep, Cheviot, 43, 66, 88–9, 110; Exmoor Horn, 42, 68, 88; Leicester, 68, 90; Merino, 44; Mountain-blackface, 66, 88, 89, 90; Shropshire Down, 90, 110; Southdown, 68; thefts of, 43–4.
Shepherds, Scottish, 88–9, 100, 110.
Sherdon Water, 34, 161.
Shorthorn cattle, 42.
Siderfin, Robert, 17.
Sidney, Samuel, x, 82, 87, 91.
Simonsbath, 30; school at, 83, 159; nursery at, 58; cottage holdings at, 99; railway terminus at, 149; shop at, 136.
— Barton, 50, 53, 71, 72, 85.
—, church of St. Luke, 21, 83, 136, 155, 160.
— Farm, 20, 21, 23, 34, 71.
— House, 11, 23, 31, 51, 65, 71, 84, 111, 154.
— Inn, 23, 109, 112.
— stud, 46; sale of, 70.
Sleeman, Richard, 117.
Small-holdings, 108–9.
Smith, Robert, agent for Exmoor, x; appointment, 55; his previous career, 54; his description of land reclamation, 56; his form of lease and tenant-right, 59–64; as agent, 68; his system of farming, 74–7; overseer of highways, 161; retires from Exmoor, 85.
Smyth, Frederick Loveband, agent for Exmoor, 86; his experiments on reclamation of peat, 86; on rape, 90; death, 98.
Smyth-Richards, F. G., agent for Exmoor, 106.
—, George Cobley, agent for Exmoor, ix, 98, 109.
Soil of Exmoor Forest, analyses of, 34–5; pan-formation in, 36–7.
Somerset, County Council of, 162.
South Forest, the, 89, 99, 134.
South Molton, 91.
— — Hunt Club, 11, 28 *fn.*
— — Rural District, 162.
— — Union, 161.
Southwood, John, clerk of works on Exmoor, 68.
Sparcombe, 99.

Spooner, Gerard, tenant of Wintershead, 59, 65, 89 *fn.*, 90.
Staghounds, North Devon, and Devon and Somerset, ix, 12, 28, 30, 38, 81–2, 161 *fn.*
Staghunting, 81–2.
Stapledon, Prof. R. G., ix, 35.
Steam cultivation, 92–8.
Stilton cheese, 66, 67, 71.
Sutherland, Duke of, 92, 96.
— plough, 92–8.
— reclamation, 92.
Swainmote Court, vii.

Taunton Courier, the, 25.
Taunton Show, 1875, 92.
Tavistock Fair, 42.
Taylor, John, 142.
Temple, George, 131.
Tenant-right, 52–3, 56, 58–63.
Thornton, Rev. W. H., perpetual curate of Simonsbath, 82, 84, 119, 136, 160.
Tibbets, Smith, 120.
Times, The, 141.
Titchcombe, 53, 86, 95, 98, 100, 110, 112.
Tom's Hill, 53, 57, 70, 72, 86, 100, 148.
Torr, Rev. J., 84.
Trees on Exmoor Forest, 23.
Trevelyan, Sir Walter, bt., 121.
Trout Hill, 33.
Turnips, 68.

Ulverston, 133.

Voelcker, Dr., 35.
von Kanitz, Baron Karl, 11.

Waley-Cohen, Sir Robert, K.B.E., 112.
Walpole, Robert, Prime Minister, 17.
Ward, James, R.A., 46.
Wardenship of Exmoor Forest, 17.
Warren, 53, 57, 65, 72, 81, 148, 149.
Water-meadows, by Edinburgh, 41; on Exmoor, 55, 77.
West Highland cattle, 40, 41–2, 46.
Wheal Eliza copper mine, 116–19, 133, 134, 141.
Wheat-growing, 66.
Wheddon Cross, 116.
White, John, 129.
White clover, 38.
White Rock Cottage, 44.
Whitfield Down, 116.
Whitstones, 148.
Whyte, William Thomas, 119.
Williams, John, 39.
Wilson, Woodrow, 139.
Wincanton, 67.
Winn, Hon. Jane Elizabeth (Mrs. John Knight), 11.
Winstitchin, 50, 72, 86, 88, 89, 100, 105, 112, 118, 134.
Wintershead, 53, 57, 59, 65, 71, 72, 86, 89, 100, 105, 134.
Wistlandpound farm, 86.
Withypool, 20.
Wittewronge, Sir John (1st bt.), 17.
Woburn sheep-shearings, 10.
Wolverley House, viii, 81.
Woodlands, 82, 112.
Woods, Forests, and Land Revenues, Commissioners of, 18, 22, 116, 158, 159.
Wool, 87.
Workington, 151.
Worthy, 148.

Young, Arthur, 10, 29.

HAMPSTEAD PUBLIC LIBRARY
7096.F

PRINTED IN GREAT BRITAIN AT THE UNIVERSITY PRESS, OXFORD
BY JOHN JOHNSON, PRINTER TO THE UNIVERSITY